



Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trademark Registered U. S. Patent Office. Copyright, 1946, by Business News Publishing Co.

INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Are Women Inferior?
Due Acknowledgment

Story of the Week

Lawyers aren't supposed to have a sense of humor. They thrive and get rich on the existence of tragedies and quarrels. Nevertheless, a lawyer told us this one last week:

The attorney for the defense was challenging the right of citizens drawn from a panel to serve on a certain jury. One prospective juror insisted that she had no business being there because, as she admitted: "I don't believe in capital punishment. So there."

Amiably, the judge sought to soothe her a bit.

"My dear woman," he explained, "this isn't a murder trial. It's a simple civil case. It involves a woman who is suing a man to recover \$2,500. She gave him that sum to buy her a fur coat. It is alleged that he lost the money in a poker game."

The challenged juror thought a moment, then changed her mind.

"All right," she said, with a toss of her head. "I'll serve gladly. Perhaps I've been wrong about capital punishment."

Are Women Inferior?

Last week, on the editorial page, we entered into a controversy with a subscriber—who must remain unidentified because he should be protected from an onslaught of worthy females.

As you may recall (we hope you do) this subscriber took issue with a previous editorial which noted the passing of the "maid" and the "hired girl" as an American institution, and which suggested that the installation of labor-saving home appliances could be the answer to this problem.

It was the contention of this subscriber (and, incidentally, he is a very intelligent and articulate fellow) that women were born to work hard and die young, and to serve men. Love, honor, and obey, and stuff.

"What will happen to the world," he cried, "when women are emancipated?"

To substantiate his position, he asked us to look up several Bible references. Not having a Bible handy, we asked a church-going Editorial Assistant, Frances Weed, to provide us with these references. Here they are:

Genesis—Chapter 3: 16: "Unto the woman he said, I will greatly multiply thy sorrow . . . and thy desire shall be thy husband, and he shall rule over thee."

I Timothy—Chapter 2: 11-15: "Let the woman learn in silence with all subjection. But I suffer not a woman to teach, nor to usurp authority over the man, but to be in silence. For Adam was first formed, then Eve. And Adam was not deceived, but the woman being deceived was in the transgression. Notwithstanding she shall be saved in childbearing, if they continue in faith and charity and holiness with sobriety."

I Timothy—Chapter 5: 14: "I will therefore that the younger women marry, bear children, guide the house, give none occasion to the adversary to speak reproachfully."

I Corinthians—Chapter 11: 3, 7, 8, 9: "But I would have you know, that the head of every man is Christ; and the head of the woman is the man; and the head of Christ is God. For a man indeed ought not to cover his head, forasmuch as he is the image and glory of God; but the woman is the glory of the man. For the man is not of the woman; but the woman is created for the man; but the woman for the man."

(Concluded on Page 9, Column 1)

Show Exhibitor List Reaches Total of 201

CLEVELAND—List of exhibitors for the All-Industry Show to be held in the Public Auditorium here Oct. 29 to Nov. 1 continues to grow, the total now being 201, according to R. Kennedy Hanson, show director, who has announced eight more firms who are planning to take booths. The new companies include:

Tube Manifold Co., Buffalo (Booth No. 1116); Balsa Ecuador Lumber Corp., New York City (Booth No. 1017); H. Kaiser Co., Inc., Boston (Booth No. 709); Western Products, Inc., Newark, Ohio (Booth No. 915); and H. A. Redmond Co., Cleveland (Booth No. 916); Engineering Associates, Inc., Seattle, Wash. (Booth No. 918); Complete Refrigerator Supply, New York City (Booth No. 1018); Pickwick Co., Cedar Rapids, Iowa (Booth No. 1016).

Fleetwood Airflow, Inc., has dropped out.

5% of Homes Provide Freezer Market—G-E

BRIDGEPORT, Conn.—In a test to determine how big the market for home freezers actually is and what are the best methods of promoting their sale, the General Electric Co. and one of its small-town dealers teamed up recently to sell 76 new 4-cu. ft. G-E freezers in seven days. According to M. J. Young, who is in charge of freezer sales for General Electric, "we estimate that, on the basis of these results, the immediate market for home freezers is 5% of the nation's electrified homes. More than 1% of the electrified homes in the test area were sold during the one-week trial period."

"We are also led to the conclusion that all the sales helps that have been used in the promotion of more familiar appliances are necessary to sell home freezers in such volume," he said.

Emphasizing the four-fold purpose of the test—to determine the size of the freezer market, how to sell the freezer, the effect of advertising (Concluded on Back Page, Column 1)

National Retailers Group To Hold Forum Oct. 25

WASHINGTON, D. C.—Well qualified authorities will supply timely information on problems confronting electrical retailers at an open-forum meeting called by the National Electrical Retailers Association to be held in the Stevens Hotel, Chicago, on Oct. 25. C. C. Simpson, managing director of the Association has announced. Electrical retailers from Illinois, Iowa, Indiana, Michigan, and Wisconsin have been invited to attend, Mr. Simpson said.

At sessions beginning at 9:30 a.m., A. E. Cascino, marketing expert for Bendix home products at South Bend, Ind., and representatives from the National Electrical Manufacturers Association, the National Electrical Wholesalers Association, the Edison Electrical Institute, and other allied associations will answer the retailers' questions, according to Mr. Simpson. Paul Kees, of Madison, Wis., new president of NERA, will reportedly make his first public appearance at the meetings.

Also present will be C. B. Sikking, first president of the organization. Mr. Sikking will be awarded a special citation of merit in appreciation of the association, Mr. Simpson said.

Reservations for the meeting and luncheon may be made at the Association's headquarters at 1304 Eye St., N.W. here.

High Mortality of Dealers Predicted By Kelley In Electrical Leagues Talk

By Jack Sweet

NEW YORK CITY—W. G. Hills, managing director of The Electric Institute of Washington, was named president of the International Association of Electrical Leagues during the latter's eleventh annual conference at the Hotel Astor here Oct. 2-4.

In one of more than 15 talks given during the conference, H. M. Kelley, appliance sales manager of Frigidaire Division of General Motors Corp. sketched a not-too-optimistic picture of the appliance outlook. He noted the over-expansion in the number of appliance dealers and said "we believe that a very high mortality of dealers is bound to come in the not too distant future."

"Among the millions of returned veterans, there are literally thousands having that ever-blooming desire to go into business for themselves. Many of these returned veterans, and others without experience in the appliance business, have put their savings into appliance stores and many have gone into business largely on borrowed capital. Some of these thousands of new appliance dealers will weather the storm ahead, but we believe a high percentage of them are in for a bad time."

The home freezer market, he said the division believes, "has been greatly over-estimated, with the result that we have far too many producers, as well as retailers, and we predict sizable casualties in this field. Our information would indicate that this product is already well into a buyer's market."

Mr. Kelley said appliance production today is far below the goal set

by manufacturers a year ago.

"Furthermore," he observed, "there is little to indicate that production levels can be raised sufficiently in the immediate future to make possible a quick reduction in the backlog of unfilled orders." But he suggested a more critical look at this backlog:

"It is important for us to recognize that essentially they represent unfilled desires and not unfilled orders."

Mr. Kelley said the rural appliance market promises to be stable for some time to come but that the urban markets "seem to be in a more vulnerable position." However, regardless of disturbing signs in the latter, he stated, "a seller's market is expected to continue for some time to come . . . in varying degrees as related to specific appliances."

This is how he views the future for particular appliances:

Refrigerators: "It looks like we will have a seller's market at least until the middle of 1947. However, there is much duplication in dealers' prospect lists, prices are rising, and earnings may be reduced. . . ."

Radios: "Many brands of table-top radios have already entered a buyer's market, with consoles following closely behind."

Vacuum cleaners: "Many brands are in a buyer's market, and 'off-brand' merchandise of many kinds is becoming difficult to move."

Washers: "Conventional washers seem to rank between refrigerators and table-top radios, while the true demand for automatic washers at their current prices is unproven below (Concluded on Page 4, Column 1)

'Shoppers' to Test Washington Salesmen

WASHINGTON, D. C.—How much "real" selling present-day appliance salesmen are doing and how courteously they are treating prospective buyers will be determined here soon when the Electric Institute of Washington "shops" the stores of all of its members.

The job will be done by a group of professional New York "shoppers" (people who pretend to be interested in buying something, but who actually are seeking information on merchandise or the methods and habits of sales personnel.)

Members of the Institute (who include establishments selling all types of electrical equipment) and their salesmen know that their stores will be shopped. That's part of the idea—to put salespeople on their toes so that they won't drive away future (Concluded on Back Page, Column 3)

Radio Parts Committee Set to Ask Decontrol

WASHINGTON, D. C.—To act formally on a proposal of R. C. Cosgrove, president of the Radio Manufacturers Association, that a petition be filed with the Office of Price Administration for decontrol of radio sets, the radio set manufacturers industry advisory committee will meet here on Oct. 16, it has been announced.

The radio parts manufacturers industry advisory committee has already voted unanimously to petition the OPA for decontrol on the ground that supply and demand for components of receiving sets are in relative balance, the RMA has declared.

The latter committee plans to file 18 separate petitions to comply with OPA regulations. It intends also to accumulate a vast amount of data on production, orders, inventories, etc. with the aid of section chairman of the RMA parts division, it was said.

Avco Asks Stock of 3 Associated Firms

NEW YORK CITY—Minority stockholders of the Crosley Corp., the American Central Mfg. Corp., and New Idea, Inc., will be asked to approve an exchange of their stock for common stock of the Aviation Corp., at special meetings to be held in November, it was announced here.

Aviation Corp.'s plans to acquire the remaining stock in these three associated firms was approved by directors of each of the corporations recently.

Avco already owns 90% of the outstanding capital stock of both Crosley and New Idea, and approximately 61% of American Central.

If stockholders approve the acquisition, they reportedly will receive stock in the ratio of four Avco shares for each share of Crosley, three and one-half shares for each share of New Idea, and two and one-eighth shares for each share of American Central.

These companies will function as divisions of Aviation Corp., according to Victor Emmanuel, chairman of Avco. There will be no change in personnel and they will follow the same policies and practices as before the consolidation, he added.

Auto Dealers to Sell Kaiser Dishwasher

NEW YORK CITY—A new aluminum, motorless dishwasher, that will operate on normal household water pressure and which will retail for less than \$100, has been announced by Henry J. Kaiser, president of the Kaiser enterprises.

The dishwasher is already in production at the Bristol, Pa. plant of Kaiser Fleetwings, Inc. and will be marketed through more than 4,200 Kaiser-Frazer automobile dealers, Mr. Kaiser said.

The new appliance is claimed to be able to wash, rinse, and dry the dishes used by four people in less than five minutes.

Prewar Margins On Appliances May Be Okayed

Revised Interpretation of Crawford Amendment May Help Dealers, Says OPA

WASHINGTON, D. C., Oct. 10—A new interpretation of the Crawford amendment to the price control act which may result in restoration of prewar profit margins to appliance dealers and distributors will be issued shortly, according to OPA officials.

Originally OPA had interpreted the Crawford amendment as applying only to automobile dealers, but now OPA officials admit that they were in error and that these provisions will apply generally.

Because of the wording of the Crawford amendment, however, this new interpretation will not necessarily mean that all appliance dealers and distributors will be permitted to operate on their prewar margins, emphasizes OPA.

In order to qualify for prewar margins under this amendment the retail industry's principal volume between 1939 and 1941 must have consisted of sales of commodities whose production was cut by more than 75% during the war years. It was on this score that appliance dealers and distributors were erroneously excluded.

Prewar margins under the Crawford amendment are further restricted to the period until unit sales of the particular commodity for six months reach the average annual sales for the calendar years 1939 to 1942, inclusive.

That last provision may conceivably eliminate several appliances, according to one OPA official who told the News that unofficial preliminary studies seem to indicate that sales of some appliances have already equaled the 1939-42 averages.

This is still a matter of conjecture, he admitted, and should be clarified when OPA announces its new interpretation of the amendment.

Furniture Men Plan Huge Sales Training Program

ATLANTIC CITY, N. J.—What is said to be the most extensive retail sales training program ever attempted in any industry will be sponsored and underwritten by the National Retail Furniture Association, its board of directors has announced here.

The program, which will embrace all home furnishings, is expected to get under way early next year, according to Board Chairman Edwin B. Spangenthal.

Basis of the program will be a series of 16 sound-color films to be produced by NRFA under the direction of W. W. Morrison, the organization's special merchandising consultant and James Oliver, manager of the merchandising division.

Thousands of copies of the films will be distributed to the nation's retailers as permanent store libraries (Concluded on Page 4, Column 5)

Production Resumed by Frick Co. after Strike

WAYNESBORO, Pa.—The Frick Co. here has announced that a strike which kept the plant closed from June 7 to Sept. 30 has been settled and operations have been resumed on a 50-hour week in view of the large backlog of orders.

An 18-cent an hour raise has been given employees. The union had demanded a closed shop, but this was not granted.

Frozen Food Foundation Approves More Department Stores as Members

SYRACUSE, N. Y.—The Frozen Food Foundation at a recent meeting here approved extension of membership to additional selected department stores.

Representatives of the foundation's 56 members in the United States and Canada heard reports describing continued growth in department store sales of frozen foods and low-temperature home storage cabinets for such products.

The policy of one-store-per-city will govern acceptance of new members into the foundation, it was stated.

Practical assistance offered members by the foundation include product testing, new product development, packaging design, equipment and processing layouts, recipe and menu development, field service home economist assistance, nutritional and microbiological analysis, economic research, publications, and other activities.

In addition, foundation members have first call in their localities on the "Frostmaster" system of frozen food distribution, developed specifically for department stores by Frozen

Foods Products, Inc., a foundation member. The plan, tested for almost three years, includes an over-counter store department and an integrated home delivery frozen food service.

The meeting elected the following board of trustees: William Burston, Allied Stores Corp.; Raymond C. Cosgrove, vice president, Crosley Corp.; Donald French, vice president, Carrier Corp.; Max E. Friedmann, president, Ed. Schuster & Co., Milwaukee; Thomas W. Johnston, vice president, R. H. Macy & Co., New York; Harold J. Nutting, vice president, Marshall Field & Co.; Allan A. Park, T. Eaton & Co., Canada; Lewis B. Sappington, general merchandise manager, J. L. Hudson Co., Detroit; Lawrence J. Stoll, president, Frozen Food Products, Inc.

Officers elected were Mr. Burston, president; Messrs. Johnston and Nutting, vice presidents; Mr. French, vice president and treasurer; Gerald A. Fitzgerald, secretary and foundation director; J. H. Baker, assistant treasurer.

Ice Industries Group Will Meet Nov. 12-15

WASHINGTON, D. C.—Most members of the National Association of Ice Refrigerator Manufacturers will display their wares at the annual meeting of the National Association of Ice Industries in Chicago Nov. 12-15. E. G. Vail, recently elected secretary-treasurer of the manufacturers' group, has announced.

At its recent annual meeting, the association elected J. H. Ganzer of the Coolerator Co. president for the coming year and F. J. Bommer, Jr., of the Sanitary Refrigeration Co. vice president, according to Mr. Vail.

25% of Vet Homes Get Forced Warm Air Heating

WASHINGTON, D. C.—Forced warm air heating systems are planned in 25% of the 629,000 dwelling units which have been approved for priority assistance by the National Housing Authority under the Veterans Emergency Housing Program between Jan. 15 and July 26 this year, according to the government agency.

More than half, 52%, of these homes expect to employ gas heat, while 27% plan for coal, and 21% for oil.

Gravity warm air heating systems are scheduled to go into 25% of these dwellings; steam and hot water plants into 17%, and "overflow" heaters (floor furnaces, wall furnaces, and space heaters) into 33%.

The agency has also broken down the types of fuel intended for each kind of heating plant. Coal will fire 33% of all boilers; oil, 37%; gas, 30%. Coal will fire 20% of forced warm air furnaces; oil, 28%; gas, 52%. Coal will fire 46% of gravity warm air furnaces; oil, 8%; gas, 46%. Gas at 68% leads fuels for overflow heaters; followed by coal, 17%, and oil, 15%.

Of interest also are the estimates of total heating equipment requirements under this housing program for the last six months of 1946 and all of 1947. The following requirements include needs for conversions of existing structures into additional living accommodations; the program to utilize surplus war housing in temporary units, prefabricated houses, and trailers. These estimates are based on the pattern set in the first half of 1946, the agency says.

An estimated 1,550,000 control items will be required in the balance of this year, with 3,500,000 seen as the 1947 requirement.

| | Last 6 months 1946 | Total 1947 |
|---------------------------|--------------------|------------|
| Boilers | | |
| Coal | 25,000 | 52,000 |
| Oil | 28,000 | 57,000 |
| Gas | 22,000 | 46,000 |
| Forced Warm Air Furnaces | | |
| Coal | 26,000 | 64,000 |
| Oil | 36,000 | 89,000 |
| Gas | 68,000 | 167,000 |
| Gravity Warm Air Furnaces | | |
| Coal | 58,000 | 145,000 |
| Oil | 10,000 | 26,000 |
| Gas | 57,000 | 144,000 |
| Overflow Heaters | | |
| Coal | 32,000 | 80,000 |
| Oil | 147,000 | 174,000 |
| Gas | 316,000 | 716,000 |
| Controls (Separate items) | 1,550,000 | 3,500,000 |

Fedders-Quigan Increases

Dividend Rate to 15c per Share

BUFFALO—Directors of Fedders-Quigan Corp. have increased the quarterly dividend rate to 15 cents a share from the 10 cents a share paid in the previous three quarters. The dividend is payable Oct. 25 to stockholders of record Oct. 10.

New York Wholesalers Will Close Saturdays, Exchange Credit Rates

NEW YORK CITY—Saturday closing, which was initiated this summer, will be continued on a year-around basis by members of the Metropolitan Refrigeration Air Conditioning Jobbers Association of New York, Inc., according to Benjamin V. Blazer of M. Blazer & Son, Passaic, N. J., secretary of the group.

In addition, the association voted at its recent meeting to retain the services of a professional credit reporting agency to give the member parts wholesalers prompt and automatic exchange of delinquent account information.

National officers of the Refrigeration Equipment Wholesalers Association, including T. I. Glou, president; George J. Roche, vice president; Alex Holcombe, Jr., treasurer; and H. S. McCloud, executive secretary, also addressed the meeting.

Member wholesalers who will continue Saturday closing are: Aetna Supply Co., New York City; Harry Alter Co., New York City; M. Blazer & Son, Passaic, N. J.; Capson Co., Inc., Brooklyn; Central Service Supply Co., Syracuse, N. Y.; Coleman Electrical Supply Co., Brooklyn; County Seat Supply Co., Inc., White Plains, N. Y.; County Supply, Inc., Norwalk, Conn.; Excel Refrigeration Supplies, Inc., Brooklyn.

Fidelco Industries, Inc., New York City; W. I. Freeman & Co., Inc., Newark, N. J.; Abe Gruber & Co., Elizabeth, N. J.; Albert Hofeld, Inc., New York City; Melchior, Armstrong, Dessau Co., Inc., Ridgefield, N. J.; Paramount Electrical Supply Co., New York City; Tesco Distributors, Newark, N. J.; Wallwork Bros., Inc., Newark, N. J.; and Wholesale Distributors, Inc., Jamaica, N. Y.

ACRMA Issues 1946 Edition Of Equipment Standards

WASHINGTON, D. C.—The 1946 Edition of Equipment Standards has just been released by the Air Conditioning and Refrigerating Machinery Association. These Equipment Standards, widely used within the industry and by its customers throughout the world, have been substantially revised and expanded in this 1946 Edition. The new publication details 30 standards covering "Freon-12" and ammonia compressors, condensing units, condensers, receivers, water and brine coolers, and self-contained air conditioning units. In addition, the publication embodies six miscellaneous standards.

The ACRMA Equipment Standards has over 100 pages of material broken down into five major divisions, with 26 illustrative figures and 16 pages of tabular material.

DON'T MISS the 1946 TRADE-IN MANUAL!

GENERAL ELECTRIC

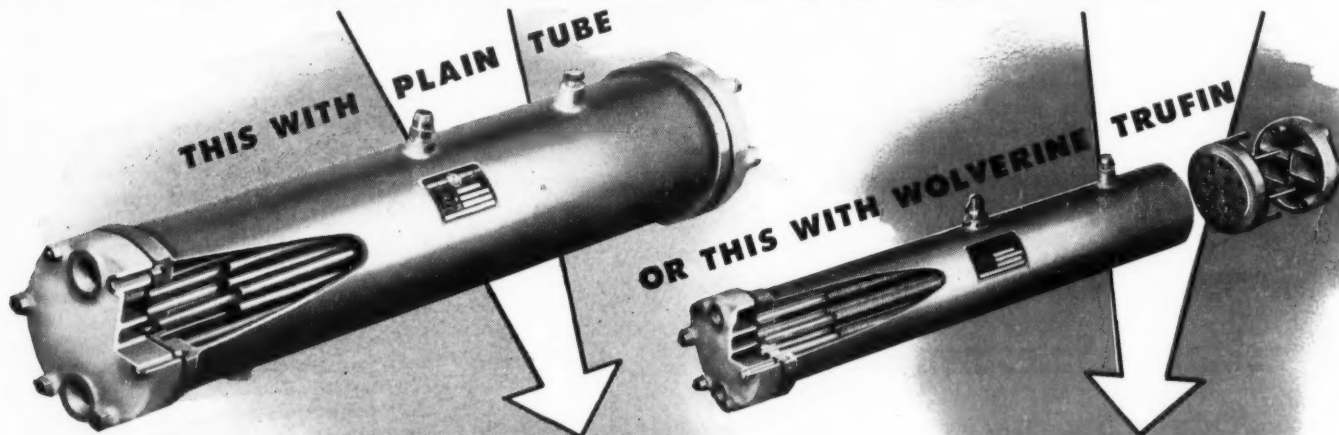
1934

Identify more than 2900 refrigerators manufactured since 1928. Complete specifications—More than 900 photographs—Sound trade-in values. Pocket-Size—256 pages.

SEND \$5 WITH ORDER OR REQUEST C.O.D. SHIPMENT

STANDARD REFRIGERATOR TRADE-IN MANUAL CO.
503 WEST 43rd STREET NEW YORK 18, N. Y.

WHICH CONDENSER UNIT IS MORE EFFICIENT?



| | | |
|-----------------------------|----------------------------|--|
| Overall Shell Size | 8 5/8" O.D. x 46 1/4" long | 6 5/8" O.D. x 41 1/8" long |
| No. of Tubes (Copper) | 48 | 20 |
| Size Tubes | 5/8" O.D. x .049" Wall | Catalog No. 165042-01 (16 fins per inch) |
| ★Total Tube Costs | \$19.35 | \$15.30 |
| Effective Tube Length | 3.26 Ft. | 2.79 Ft. |
| Total Effective Lineal Ft. | 156.5 | 55.8 |
| Total Surface Area of Tubes | 26.3 Sq. Ft. | 28.4 Sq. Ft. |
| Total Net Weight of Unit | 168 Lbs. | 112 Lbs. |
| List Price of Complete Unit | \$191.50 | \$160.00 |
| Capacity of Unit | 3 Tons | 3 Tons |

★ These prices subject to variation for quantity.

HERE'S A NEW BOOK ABOUT Condenser Tubes

that you can have by writing for it on your stationery. It gives valuable information, supported by charts and tables, on factors that make efficient condenser units.

WOLVERINE TUBE DIVISION

CALUMET & HECLA CONSOLIDATED COPPER COMPANY

1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN
In Canada: UNIFIN TUBE CO., LONDON, ONT.

You can see both of these condensers at the All Industry Refrigeration Show, October 29th to November 1st—Cleveland Public Auditorium. Come to the Wolverine Booth, No. 313, and make your own comparisons.

Many advantages stem from the compactness made possible through the use of Trufin. Construction is simplified. Because less than half the number of tubes need be rolled into the tube sheet (when Trufin tubes are used) considerable labor is saved. Less drilling of tube sheet is thereby necessary and the header pattern for water passes also is simplified. Fewer tubes, too, mean less maintenance. Similarly, increased capacity can be obtained on a unit already installed by replacing plain tubes with Wolverine Trufin tubes.

The above comparisons between plain tube and Wolverine Trufin make apparent why Trufin is gaining such wide acceptance wherever heat transfer problems are involved.

The two condensers illustrated above were used for this comparison through the courtesy of Acme Industries, Jackson, Michigan.

STANGARD
Prime Surface
COLD PLATES

For Maximum Refrigerating Efficiency



THE STANGARD-DICKERSON CORPORATION
46-76 Oliver Street • Newark 5, N. J.
STANGARD KNOWS REFRIGERATION

Copyright 1945 by The Stangard Dickerson Corporation

Westinghouse to Vote On Merger & Change In Capital Stock

Admiral Reaches Volume Production On Refrigerators; Starts Range Line

PITTSBURGH—A rearrangement of the capital stock structure of Westinghouse Electric Corp. and a merger with two wholly-owned subsidiaries will be proposed to stockholders at a special meeting here Dec. 5, according to Gwilym A. Price, president.

One of the subsidiaries is B. F. Sturtevant Corp. in Hyde Park, Boston, manufacturer of air conditioning and ventilating equipment. The other is Benolite Corp. at Manor, Pa., which produces insulating varnishes.

Mr. Price explained that under the merger plan the authorized capital stock would consist of \$65 million par value of serial preferred, or 650,000 shares of \$100 par value each, and \$225 million common stock, or 18 million shares with par value of \$12.50 a share.

"By this merger," Mr. Price said, "the presently outstanding \$3,998,700 par value 7% preferred stock of the company would be converted into \$7,997,400 par value of new 3½% cumulative preferred stock and \$1,999,350 par value common stock. For every \$100 par value of present 7% preferred stock, there would be issued \$200 par value of new 3½% cumulative preferred stock and \$50 par value of common stock."

Westinghouse proposes, after the merger, to sell \$50 million par value of the new preferred as part of the financing for its expansion and rearrangement program and for additional working capital.

"While the company will finance a substantial amount of its \$132 million expansion and rearrangement program out of past earnings, it is contemplated that additional capital requirements for this program, plus the requirements of additional working capital necessitated by the increased volume of business and the increased cost of doing business, will require the company to obtain approximately 120 million of new funds through the issue of securities," Mr. Price said.

He declared that accumulated demand, growth due to the increased use of electric energy and new products "all foreshadow a much higher level of sales in the future than at any time in the company's history, except during the war."

The recently announced offering of \$1,647,037 shares of common stock was postponed, he said.

It was explained that the approximately 50 million to be realized from sale of the new preferred, and \$30 million from the contemplated common stock sale, will be used to retire \$80 million two-year bank loans entered into May 1. The remaining approximately \$7 million par value of authorized new preferred would be available for future needs, along with the unissued common shares.

POSITION OPEN: Assistant Engineer

ONE of Detroit's oldest leading distributors of air conditioning and refrigeration equipment needs an Assistant Engineer. Must be experienced and capable of sizing, making layouts and estimating. Excellent opportunity for work under one of Michigan's leading Engineers in the field. A Carrier Distributor.

Write

James and Roach
INCORPORATED
282 E. MILWAUKEE
DETROIT 2, MICHIGAN

CHICAGO—Now producing at a \$40,000,000 annual rate, Admiral Corp. reports that it is manufacturing its Dual-Temp refrigerator in volume and has started production of electric ranges in a new factory.

President Ross D. Siragusa declares that the outlook for coming months is "decidedly encouraging."

Despite bottlenecks in steel, copper, and motors, the supply situation is improving and should continue to get better, according to Mr. Siragusa.

He expresses hope that display models of the Dual-Temp refrigerator would be in the hands of leading appliance dealers within the next two months. The new model is said to contain a completely insulated freezing locker and a large moist cold compartment that does not require defrosting.

Display models have already been shown in New England, and future

showings are scheduled for New York City, Cleveland, Chicago, Los Angeles, San Francisco, Kansas City, and southern cities, in that order.

Foreign demand for Admiral products has been so heavy that additional manufacturing facilities have been made available in the east to serve this market, Mr. Siragusa declares.

For the British Empire market, Admiral is said to be organizing the Admiral Corp. of Canada, Ltd., with headquarters and manufacturing facilities in Toronto. American Admiral will have 40% holdings in the company.

Admiral's export division reportedly expects annual sales of several million dollars during the next five years.

Before the war, export shipments were "comparatively negligible," Mr. Siragusa says.

Howard Made McCray Factory Manager

KENDALLVILLE, Ind. — Appointment of Wallace R. Howard as factory manager at the McCray Refrigerator Co. plant here has been announced by the company.

Mr. Howard was formerly assistant factory manager at the Rex Mfg. Co. at Connersville, Ind. He had been with Rex for 16 years.

In New Job



WALLACE R. HOWARD
Has been appointed factory manager at the McCray Refrigerator Co.

Owens-Corning to License 181 Glass Fiber Patents

TOLEDO —A total of 181 patents, including inventions relating to glass fiber packs for air filters and chemical processing, glass fabrics for electrical insulation, and glass fiber insulation for household appliances, are being offered to the public for non-exclusive licensing by the Owens-Corning Fiberglas Corp. here.

Twenty-four patents cover inventions for the use of glass fiber or glass fiber products in various items.

New "DETROIT" No. 573 THERMOSTATIC EXPANSION VALVE

All The Reliability of No. 673 For Smaller Installations



The latest addition to the "Detroit" line of Expansion Valves is No. 573.

Tests show it has the sturdy performance of the No. 673. It is designed for small commercial installations and on such develops operating characteristics superior to single diaphragm valves at no penalty in cost. It has a two diaphragm gas charged power element offering gas charging in its simplest, most effective form—a single efficient power element.

Try these valves on your next suitable job. They provide the same trouble-free control as the No. 673.

CAPACITIES OF NO. 573 VALVE

Rated at ½ ton Freon-12, or .9 ton Methyl

UNIT NUMBERS OF NO. 573 VALVE (Stock Items with Your "Detroit" Jobber)

| Unit No. | Refrigerant | Max. Pressure | Connection |
|----------|-------------|---------------|--|
| 57300 | Freon-12 | 45 | Inlet ¾" SAE for ¾" x ¼" reducing nut |
| 57309 | Freon-12 | 10 | |
| 57311 | Methyl | 35 | |
| 57315 | Methyl | 5 | Outlet ½" SAE for ½" x ⅜" reducing nut |

Use "Detroit" Unit Numbers When Ordering.

SEE THIS VALVE AND OTHER DETROIT LUBRICATOR REFRIGERATION PRODUCTS AT The All Industry Refrigeration and Air Conditioning Exposition—Cleveland Public Auditorium, Oct. 29 to Nov. 1, 1946. North Exhibit Hall Booths 503 and 603

DETROIT LUBRICATOR COMPANY

General Offices: 5900 TRUMBULL AVENUE
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG



"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

Annual Electrical Leagues Meeting Covers Broad Range of Discussions

(Concluded from Page 1, Column 4)
cause of a lack of sufficient offerings."

Electric ranges: "The demand is unusually firm. . . ."

Electric water heaters: "The potential market has greatly improved over the prewar picture. We frankly believe there is going to be good business in this field for some time to come. . . ."

The whole picture, he said, comes down to this: "It is essentially our job to work constructively with all of those dealers who have a chance to survive. We must help them to become better dealers so that they can continue to sell appliances and broaden the development of the major appliance industry. . . ."

Formerly vice president of the association, Mr. Hills replaced Victor W. Hartley, managing director of the Pacific Coast Electrical Association. S. E. Strunk, secretary of the Electrical League of Cleveland, was elected vice president, and C. H. Christine, manager of the St. Louis Electrical Board of Trade, treasurer.

About 100 conferees from all parts of this country and from Canada heard speakers call for a recognition of the electrical interdependence between every branch within the industry and for each individual to become an "evangelist" in promoting electric living.

With the world on the threshold of a great electric age, speakers stressed, the entire industry must realize the vital need for coordinated action

along a united front and that employer and employee alike must accept a personal responsibility to do his full share in meeting the challenge.

Employee Problems

A highlight of the conference was a talk by Gwilym A. Price, president of Westinghouse Electric Corp., in which he said a new technique must be developed to take the place of the close relationship which formerly existed between employer and employee. He suggested the time and energy spent by management in utilizing technical knowledge and machinery should be exceeded "in developing the full potential of our individual employees."

Mr. Price emphasized that "we must and we can eliminate the belief that there is an essential conflict between employer and employee."

"The modern industrial structure has robbed many an employee of much of his sense of individual importance," he said. "So far as we can, we must restore it. We must keep our people informed of our plans, our policies, our hopes for the future, and their place in them. Above all we must give them a feeling of unity with management and ownership."

His talk was given at the George Westinghouse Centennial luncheon sponsored by the Electrical & Gas Association of New York as part of the conference. A bust of George Westinghouse was unveiled during the luncheon.

H. C. Calahan, vice president of General Electric Supply Corp. and president of the Electrical & Gas Association of New York, welcomed conferees, after which Mr. Hartley gave the keynote address.

"Electrical Interdependence in Prac-

tice," was discussed by two speakers, N. J. MacDonald, vice president of the Thomas & Betts Co. and chairman of the National Electrical Manufacturers Association's general sales promotion committee, and J. R. Poteat, manager of the range and water heater division of General Electric Co., and a member of the NEMA committee.

Both emphasized that the employee particularly must be made aware of his stake in the business and of how he must talk and live electrically in his community to insure his own security and the development of the industry. They asked listeners to remember that all in the industry have a common goal and that no one segment can stand alone, for what affects one branch affects every other one—both beneficially and adversely.

Symposium Conducted

A symposium on activities sponsored by the four major national electrical associations brought together L. W. Davis, general manager of the National Electrical Contractors Association; C. G. Pyle, managing director of the National Electrical Wholesalers Association; W. J. Donald, managing director of NEMA; and J. T. Coatsworth, commercial director of the Edison Electric Institute. They outlined their groups' contribution to the electrical interdependence idea.

Among NEMA projects discussed by Mr. Donald was the rural and suburban market development program designed to meet the threat of the liquefied petroleum gas industry. This challenge, he cautioned, must be met head-on "if we are not to be faced with what might become a near disaster."

Kenneth Cook, director of sales training for the American Central Mfg. Corp., spoke on "Selling, Installing Complete Electric Kitchens."

How house heating by the heat pump (reverse refrigerator cycle) method is being pushed by American Gas & Electric Service Corp. to meet gas competition was related by S. W. Andrews, rate engineer.

He said that after discussions with manufacturers and utilities, specifications on this type of heating-cooling unit had been revised and that modified types probably would be available by the 1948-49 heating season. It was decided, he said, to concentrate production on two kinds: air to air and the smaller water to air. The units would be 3 hp., single-phase jobs.

Production, he noted, is waiting on sufficient orders from utilities. Manufacturers now are studying the revised specifications, he said, and shipments are expected to be started by June, 1948.

He mentioned units being produced by Drayer-Hanson and Muncie Gear Works, and a new type being developed by Terratemp in Indianapolis.

Mr. Andrews also noted the "definite possibilities" for water-heating applications. He said specifications had been sent to manufacturers on air-to-water heat pump water heaters.

Other Talks Presented

Other papers dealt with "Lighting Possibilities With Special Emphasis on the Commercial Market" (by H. H. Green, Nela Park, General Electric); "Electrical Applications to Increase Industrial Efficiency" (by C. B. Stainback, manager, industrial department, Westinghouse); "Television and Its Load Building Characteristics" (by A. B. Rodner, television specialist of Commonwealth Edison Co.); and "How Our Industry Can Advance Acceptance of Adequate Wiring By the Construction Industry" (by H. P. Vermilya, director of housing research, John B. Pierce Foundation).

Mr. Stainback showed two films during his talk, one of them being

the new Westinghouse film, "Dawn of Better Living."

The proposition that television "can become a major industry almost overnight" was put forth by Mr. Rodner. He cited one estimate of 4,000,000 sets in 1947 and an FCC survey of 85 manufacturers who foresaw 114,900 in 1946.

He said that out of 2,000 persons interviewed in Chicago, 575 wanted sets. Projecting this 28% would mean an immediate market there for 246,500 sets, he pointed out.

A promotional campaign is now underway in Chicago, he stated, and said a television exposition has been tentatively scheduled for March next year there.

In answer to questions, Mr. Rodner guessed the current cost of the average set at close to \$300. He said one estimate for installation was \$40 and another \$60. He thought 40-50,000 sets would be available by the end of this year. Colored television, he declared, is two to three years away.

New Board Elected

In addition to the new association officers mentioned, the new board of governors consists of G. W. Austin, manager of the Electric Service League of Ontario; J. Clark Chamberlain, secretary-manager of the Bureau of Radio and Electrical Appliances, San Diego County; R. B. Hubbard, manager of the Rocky Mountain Electrical League, Denver; C. G. O'Dell, executive secretary of the Electrical Association of Detroit; H. P. Wilson, secretary-manager of the Electrical Institute of the Tri-Cities, Rock Island, Ill.; and J. A. Morrison, managing director of the Electrical Association of Philadelphia.

Mr. Hartley, the retiring president, becomes an advisory member of the board. O. C. Small, manager of the Business Development Department of NEMA, continues as secretary.

The program committee for the conference was made up of Mr. Hills; R. T. King, secretary of the Central Jersey Electrical League; Mr. Morrison; and Ralph Neumuller, executive vice president of the Electrical & Gas Association of New York.

During one luncheon period, John C. F. Coakley, historian of Edison Pioneers and public relations director of the Thomas A. Edison Centennial committee, discussed plans for the Edison Centennial Celebration.

More detailed reports on papers will be carried in future editions of the NEWS.

Training Program--

(Concluded from Page 1, Column 5)
for the complete training of new sales personnel and as refresher courses for old timers, Mr. Spangenthal said.

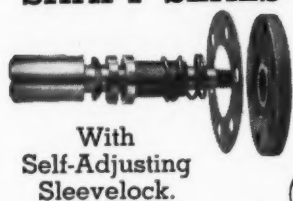
In announcing the new project, Mr. Spangenthal declared: "Not only will the retail and manufacturing segments of the industry profit from this extensive training program by reason of increased volume through more effective and more informed selling, but over a period of years this volume inevitably will result in lower unit costs and greatly improved service to the home makers of America."

An offer by the Institute of Carpet Manufacturers of America to appropriate one-fourth of the production cost of the 16 films was accepted by the board of directors, according to Mr. Spangenthal.

Super-Cold Sales Set Record

LOS ANGELES — Largest consolidated sales in the history of Super-Cold Corp., exclusive of war business, were chalked up during the first eight months of 1946, N. A. Kessler, president of the corporation, has announced. Consolidated sales for that period totaled \$3,537,918.

Specify CHICAGO SHAFT SEALS VALVE PLATES



With
Self-Adjusting
Sleeve Lock.



Only Chicago valve
plates have replace-
able seats.

CHICAGO SEAL CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

Take a look at what can't be seen



Margo Black, J & H Associate
Plant No. 4

Even a flat wheel

on a streamliner isn't as bad as an odd-sized ball in a ball bearing. That ball wears too fast, increases friction, leads to break-downs and needless cost. But no one could see or measure rapidly the fraction of an inch that would make that costly difference. So Jack & Heintz found a way. They developed an electronic ball sorter that separates balls automatically into 10 groups, the diameter of each group graded to an accuracy of ten millionths of an inch . . . and it does this 8 times as fast as conventional equipment.

That's why Jack & Heintz ball bearings will last longer, hold friction at the minimum, reduce cost, keep shafts turning longer. These are all typical results of the Jack & Heintz Mass Precision technique that is being applied today not only to ball bearings but also to electric motors, compressors, aircraft accessories, electronic gauges and Eisemann magnetos. And tomorrow this same Jack & Heintz Mass Precision will bring other important developments that will make equally startling savings in industry and homes.

See latest Jack & Heintz developments at
All Industry Show . . . Booth 102

JACK & HEINTZ PRECISION INDUSTRIES, INC.

CLEVELAND 1, OHIO

SEE TYLER

BOOTH 1008
ALL-INDUSTRY
REFRIGERATION
& AIR CONDI-
TIONING EXPOSI-
TION • CLEVELAND



TYLER COMMERCIAL REFRIGERATORS • HARDER-FREEZ HOME LOCKERS

Consultants
FOR

94-56

National Group Flays Policy of Cutting Salesmen's Pay During Seller's Market

NEW YORK CITY — Reducing salesmen's commissions and switching salesmen from a commission to a straight salary basis to take advantage of "the tail end of the sellers' market" was hit as a poor policy for manufacturers by Gene Flack, vice president of the National Federation of Sales Executives.

Such manufacturers will find themselves far behind more liberal employers when the nation's unprecedented productive capacity makes sales ability and enthusiasm the key to adequate distribution and profitable operations, he asserted.

When salesmen and sales managers were mere allocation engineers and when sales promotion managers were more accurately described as sales prevention managers, they permitted salesmen to operate undisturbed.

"Now, on the threshold of a buyers' market, they are going in for commission cutting and other tactics which result in the demobilization of sales forces. It doesn't make sense," he declared.

When all or most of their incentive to work for their employer is destroyed through reduced compensation, "the best salesmen will naturally gravitate toward those industries and organizations which are fully aware that they will have to really sell in the very near future and are only too glad to secure the services of such personnel," Mr. Flack warned.

He pictures the ideal method of compensation as a basic salary sufficient to meet present day living costs plus a commission for initiative and ability.

To those who argue that payment of such a basic salary often results in the refusal of the salesman to "perform any function beyond that which is absolutely necessary to

merit his salary, Mr. Flack replies:

"Such a man should not be hired as a salesman to start with. If aptitude tests and other methods of scientific selection are employed it will be demonstrated beyond all doubt that he is no salesman."

Mr. Flack pointed out that when competitive conditions return in full force, one salesman will represent the continuous employment of 33 factory employees by virtue of his activities.

Henry W. Sandberg, national sales manager of the General Foods Sales Co. seconded Mr. Flack's views and added:

"Now is the time to continually train salesmen and prepare for the buyers' market conditions in 1947."

Mr. Sandberg further declared that a shortage of really competent salesmen exists right now.

Taking exception to these views, a widely known association representative who has long maintained contact with sales personnel problems said that he failed to see why salesmen should retain such "inordinate" earnings when in the vast majority of cases, buyers pleaded for their merchandise and they exerted little or no sales ability.

"For those who have been placed on a straight salary earnings are as high now as ever they were when operations were conducted on a commission basis," he asserted.

It is said that although specific cases of compensation losses are difficult to obtain from salesmen themselves because of their fear that more and more manufacturers will get the idea, both soft and hard lines salesmen have been hit. Prospects are that the situation will get worse before it gets better, observers declare.

4 Models of Kaiser Fleetwing Dishwashers Assigned Resale Ceilings by OPA for 3 Zones

BRISTOL, Pa.—Three-zone ceiling prices for resales at all levels of four models of dishwashers manufactured by Kaiser Fleetwings, Inc., here were announced recently by OPA in Order 518, MPR 188.

Retail ceilings range from \$99 to \$173.65.

For sales by Kaiser Fleetwings to Kaiser-Frazer Corp., maximum prices were set as follows:

| Model | Zone 1 Each | Zone 2 Each | Zone 3 Each |
|-------|-------------|-------------|-------------|
| DA-1 | \$113.87 | \$115.22 | \$118.22 |
| DB-1 | 91.16 | 92.21 | 94.41 |
| DC-1 | 97.74 | 98.84 | 101.19 |
| DD-1 | 66.50 | 67.25 | 67.80 |

These prices are f.o.b. the city of the wholesale distributor or wholesale consumer purchasing the dishwasher from Kaiser-Frazer, according to the order.

"As used in this order," the agency explained, "wholesale consumer means a person who purchases dishwashers for use rather than resale, but who is not an ultimate consumer."

"The term . . . includes but is not limited to builders purchasing dishwashers for use in equipping residential buildings they are constructing, and apartment house owners or operators purchasing dishwashers for use by tenants in the purchaser's apartments."

OPA fixed the following ceilings, f.o.b. the purchaser's city, for sales to wholesale distributors or wholesale consumers:

| Model | Zone 1 Each | Zone 2 Each | Zone 3 Each |
|-------|-------------|-------------|-------------|
| DA-1 | \$127.35 | \$128.70 | \$131.50 |
| DB-1 | 101.96 | 103.01 | 103.21 |
| DC-1 | 109.30 | 110.40 | 112.75 |
| DD-1 | 74.38 | 75.13 | 75.68 |

Maximum prices for sales by wholesale distributors to retail dealers were set as follows and are f.o.b. the wholesale distributor's warehouse:

| Model | Zone 1 Each | Zone 2 Each | Zone 3 Each |
|-------|-------------|-------------|-------------|
| DA-1 | \$135.79 | \$137.14 | \$139.94 |
| DB-1 | 108.71 | 109.76 | 111.96 |
| DC-1 | 116.55 | 117.65 | 120.00 |
| DD-1 | 79.30 | 80.05 | 80.60 |

For sales by retail dealers to ultimate consumers, the agency established these ceilings, which include delivery but not installation:

| Model | Zone 1 Each | Zone 2 Each | Zone 3 Each |
|-------|-------------|-------------|-------------|
| DA-1 | \$169.50 | \$170.85 | \$173.65 |
| DB-1 | 135.70 | 136.75 | 138.95 |
| DC-1 | 145.50 | 146.60 | 148.95 |
| DD-1 | 99.00 | 99.75 | 101.30 |

In an opinion accompanying the order, OPA said the ceilings were established under the Fourth Pricing Method, Section 1499.158, MPR 188, and are in line with the level of ceiling prices established by that regulation.

Wholesale Prices Set On 2 Monitor Vacuums

NEW YORK CITY — A recent price-approval order issued by OPA fixed wholesale ceilings for two new models of Monitor vacuum cleaners with attachment sets.

Order 12, RMPR 111, established these maximum prices:

| Model | Ceiling price to dealers |
|--|--------------------------|
| FLCA-3 Floor type—motor driven brush | \$40.96 |
| 11 Piece attachment set for use with upright type vacuum cleaner | 15.46 |
| TAC-cylinder type—includes: 10 piece attachment set | 36.17 |

"These ceiling prices," the order reads, "are applicable only to vacuum cleaners purchased by the Monitor Equipment Corp. at ceiling prices which include an adjustment either under Amendment 15 to Revised Maximum Price Regulation No. 111 or Order 268 under Revised Supplementary Order No. 119. They include the increases allowed by Amendment 22 to Revised Maximum Price Regulation No. 111 and may not therefore be increased under that amendment."

2 Randall Beverage Coolers Receive OPA-Approved Ceilings

DEMOPOLIS, Ala.—Two beverage cooler models produced by the H. P. Randall Mfg. Co. have been assigned ceiling prices by OPA in Order 656 to MPR 591 as follows:

| | Distributors | Dealers | Consumers |
|-----------------------|--------------|----------|-----------|
| 8 ft. beverage cooler | \$265.00 | \$318.00 | \$530.00 |
| 6 ft. beverage cooler | 199.00 | 238.80 | 398.00 |

Crating charges not to exceed \$6 and actual freight charges may be added to these prices.

Wizard Washer Prices Listed

KANSAS CITY, Mo.—New retail ceiling prices for six private brand models of Wizard washing machines sold by Western Auto Supply Co. were announced recently by OPA in Order 72, SO 133. They are:

| Model | each |
|------------------|----------|
| 117C and 117AC | \$ 90.75 |
| 117CP and 117ACP | 96.50 |
| 117CG and 117ACG | 119.00 |

For Dependable Refrigerants

"EXTRA DRY ESOTOO" (Liquid Sulfur Dioxide)

"V-METH-L" (Methyl Chloride)

Distributors of "FREON" REFRIGERANTS 11, 12, 21, 22, 113

VIRGINIA SMELTING COMPANY
NEW YORK • BOSTON • DETROIT

THE INEXPENSIVE UTILITY FAVORITE



INLAND TILT OUT ICE CUBE TRAY

Low in price, yet high in utility, Inland's Magic Finish Tilt Out Tray is favored for original equipment by leading automatic refrigerator makers, as well as for replacement sales by dealers.

Fast freezing and "immediate delivery" of full-sized ice cubes—two at a time or a trayful—make the Tilt Out Tray the low priced favorite with users, too.

Moreover, the efficient Inland Tilt Out comes in both single tray and double duty Dessert Tray sizes, with or without pan lifter.

For prices and full information write to—
INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio



FOR TWO CUBES As shown in illustration above, it is easy to use the Operating Lever and get two or more full-sized ice cubes from the Inland Tilt Out Ice Cube Tray.



FOR A TRAYFUL After cubes are loosened the grid is lifted vertically and cubes fall into the single tray pan—or Inland Dessert Ice Cube Tray Pan as shown above.

"There's many a slip 'twixt . . ."

PLANNING AND PRODUCTION

ECONOMIZE WITH EXPERT ENGINEERING

- ✓ Design — Development
- ✓ Complete Shop Drawings
- ✓ Product Performance Data
- ✓ Cost Analyses and Comparisons
- ✓ Manufacturing Sources and Techniques
- ✓ Full Testing Facilities

Consultants to the Refrigeration, Air Conditioning, Heating and Ventilating industries.
FOR APPOINTMENTS DURING CLEVELAND EXPOSITION—CALL HOTEL STATLER

James J. Corey CORP.

94-56 FORTY-THIRD AVENUE, ELMHURST, NEW YORK



PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES

MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

PURO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.



SUPERIOR VALVE & FITTINGS COMPANY
Pittsburgh 26, Pennsylvania

VALVES, FITTINGS & ACCESSORIES
For All
• Refrigeration
and
• Air Conditioning Systems

2 'Men from Missouri' Show Customers the Advantage of Frozen Foods and Freezers

Partners Use Ingenuity to Build Demand for Products

CLAYTON, Mo.—A series of clever merchandising ideas launched at twin promotion of Bishop home freezers and nine lines of popular frozen foods, have brought quick success to Boark Products Co., operating three large frozen food stores and home freezer dealerships.

The company, headed by W. Boland and George Clark, went into business in late 1945 with an exclusive frozen foods store at Clayton, a western suburb of St. Louis comprised entirely of exclusive homes. Both freezers and frozen foods sold so swiftly that a similar store was opened in Webster Groves, another suburb of the city, and this summer a third unit in Sedalia, Mo., completed the chain.

Partners Boland and Clark have laid out the three stores, claimed to

be among the most handsome frozen food outlets in the country, in colonial style buildings with brilliant neon signs, white woodwork, with all merchandise displayed to advantage. In each store, from 6 to 16 cu. ft. Bishop home freezers are used to show a huge inventory of frozen foods.

Finding that customers objected to lifting the heavy lids of the freezers, and that ordinary display methods were impractical, Mr. Boland invented a plastic lid, which slides over the top of the open freezers, thus simplifying shopping and giving ready visibility for customers. The stores average between 150 and 300 customers a day, and all feature delivery service by means of motor scooters equipped with dry-ice refrigerated compartment.

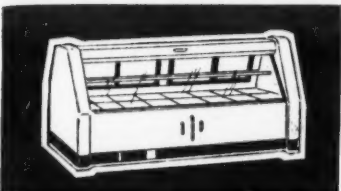
Most effective merchandising idea developed has been a system whereby purchasers of home freezers may accept them on a "test basis" with a \$50 inventory of frozen foods. The unit is installed in the customer's home, and is visited once a week by a motor scooter delivery man, who notes which foods have been consumed, restocks the case, and bills the customer at the end of the month.

By stressing purchases of frozen foods in large quantities in this manner, the prospect quickly becomes educated to the use of the home freezer, and the sale is "clinched." Boark Products Co. has dozens of



This view shows a section of one of the three Boark frozen food stores where frozen food sales are emphasized by owners W. Boland and George Clark in order ultimately to develop a demand for their line of home freezer cabinets. Note how the foods are departmentalized according to "fruits," "juices," and "pastries," etc.

BRIGHTEN YOUR FUTURE with FOGEL



THE COMPLETE LINE OF
TIME-TESTED DEPENDABILITY
INTERESTING PROPOSITION
TO QUALIFIED DISTRIBUTORS
A FEW TERRITORIES STILL
AVAILABLE. INQUIRE TODAY!

FOGEL REFRIGERATOR COMPANY Since 1899
5400 Eadom St., Philadelphia 37, Pa.



New!
COOLING TOWERS BY MARLO

- Triple-type Induced Air Wetted Surface Water Spray
- Compact in space, weight, and price
- Outdoor—Indoor 3 to 50 Tons—Built sectionally

Write for Bulletin 406

MARLO
HEAT TRANSFER SURFACE

Ball-Bonded Blast Coils—Cooling and Heating • Air Conditioning and Refrigeration Apparatus • Industrial Blower Units • Unit Coolers
Evaporative Condensers and Coolers • Low Temperature Apparatus

MARLO-HEAT TRANSFER

See our new line in Cleveland

MARLO COIL COMPANY
ST. LOUIS 10, MISSOURI

orders for this system on its books.

At the Sedalia, Mo., store, 180 miles away, the partners found small-town residents more resistant to frozen foods and home freezers than in the St. Louis area. Therefore, a different system of merchandising was developed.

When newspaper advertising proved to show little or no results, and displays of frozen foods in the store evoked only minor curiosity, the Boark management went to local associations in Sedalia and offered to provide all food for basement suppers, church socials, etc., merely to introduce Sedalia housewives to frozen foods and the use of home freezers.

Instantaneous Success

This idea proved to be an instantaneous success—as women's associations and church groups agreed to experiment with the idea. Since then there have been regularly scheduled meal services, for which the Boark store in Sedalia supplies all foods, the cost on a wholesale basis amounting to around \$50.

At each such event, a huge 5 x 4 foot sign is prominently featured, which reads, "The Foods Being Served at this Meal Consist of Birds-eye Frozen Chicken, Frozen Peas,

Pfeifers Frozen Parker House Rolls, Dewkist Frozen Peaches, etc., and was donated by the Boark Products Co., 115 E. Fifth St., Sedalia, Mo." A signature line reads, "Dealer in Fine Frozen Foods, and Distributor for the Bishop Home Food Freezers."

Even Skeptics Approved

Small-town housewives have shown immediate response to this type of promotion, according to Boark Products—and many skeptical women who were accustomed to fresh produce, fresh meats, etc., from surrounding farms, immediately showed their approval by purchasing huge quantities of frozen foods.

All three stores are energetically using newspaper advertising, cooked samples of popular frozen foods in the stores, etc., to educate new customers to the possibility of frozen foods.

"Although we are primarily home freezer cabinet dealers, we realize that our success will be directly dependent upon the reception of frozen foods in the home," George Clark summed up. "Therefore, our entire selling program, now and in the future, will be wrapped around vigorous promotion of frozen foods, and freezer follow-up on food-buying customers."



In Sedalia, Mo., Partners Boland and Clark overcame the sales resistance of small-town residents by furnishing frozen food (wholesale) for basement suppers, church socials, etc. Result of this technique was an immediate increase in the sales of frozen foods by housewives heretofore skeptical.

TYPHOON

A RESPECTED NAME
IN AIR CONDITIONING

3, 5 and 7 TON SELF-CONTAINED UNITS

All-purpose, handsomely designed, smooth functioning air conditioning units with all copper condenser and liberally designed coils—removable outlet box for use with duct system—removable panel in back of outlet box for additional grills where front and back air distribution is desired in center of room . . . two way adjustable deflecting grill . . . knock-out for fresh air connection . . . removable one-piece panel in front for easy accessibility. The cabinets are made of furniture steel . . . crackle finish. Also available with one or two row heating coils.

TYPHOON PRODUCTS

will be on display at the
ALL INDUSTRY SHOW

Cleveland, Ohio, Oct. 29 to Nov. 1



ICE AIR CONDITIONING CO., INC.
794-6 UNION STREET • BROOKLYN 15, N. Y.

3rd Phase of Kelvinator Program Accents Sales Training to Meet Buyer's Market

DETROIT—A major phase of an exhaustive sales-force building program for dealers and distributors is being launched this fall by the Kelvinator division of Nash-Kelvinator Corp.

Zone and distributor training managers who have been schooled during the past year are expected to carry the program to all Kelvinator retailers and their sales force during the next six months, according to a company announcement.

The program "deals with all phases of sales force dynamics, from the attraction of promising personnel, right through to their selection and training and direction," said C. T. Lawson, vice president in charge of Kelvinator sales.

Explaining why Kelvinator is carrying out this program, Mr. Lawson declared:

"Salesmanship currently may not be at a premium, but we all know that the time will arrive soon when it will resume its place as the most important single factor in profitable retail operation.

"When the demand backlogs are whittled down by production volume, the retailers' biggest problem will be sales power. This can't be created overnight.

"With the best tools, the minimum job of building a reasonably good sales force might be done in six months. Our present steps are concerned with providing the Kelvinator retailer and the wholesale men who serve him with the necessary tools."

Developed under the direction of H. L. Schmutz, Kelvinator director of sales education who has more than a quarter century of appliance selling behind his work, the sales force building program is divided into four parts.

These parts are: the attraction of men, the selection of men, the training of salesmen, and the direction of the sales force.

To fulfill the first part of the program, Kelvinator produced a booklet entitled "To a Man in Search of His Future." This booklet proved so popular after its introduction last year that additional printings had to be run off, a Kelvinator official said.

The book discusses the profession of salesmanship for the benefit of the neophyte considering the field. It contains a simple, self-scored test, developed for Kelvinator by the Psychological Corp. to help the individual to determine whether he is the general type likely to succeed in selling.

The second phase of the program is based on a volume called "The Selection and Compensation of Retail Appliance Salesmen."

Factual material in this book was drawn largely from Kelvinator's retail sales management forum held in Detroit in 1944 and attended by a selected group whose combined years of retail selling experience totaled more than a century. This tome also includes selection tests prepared by

the Psychological Corp.

According to D. A. Packard, assistant general sales manager, "there is no perfect instrument for the selection of salesmen, but this book lays down sound principles, which if applied intelligently, can hardly fail to increase a retailer's batting average in the selection of his sales organization."

The third part of the program, the training of salesmen, is the one that is now getting under way. Tools for this section include two volumes supported by 10 training films.

These were prepared under the supervision of C. J. Coward, director of advertising and sales promotion.

The first text, "Your Way to Success in Appliance Selling," is a concise instruction manual on salesmanship in the field in general. It is supported by four sound slide color

films entitled: "Here's to Your Vocation in Sales," "How and Why Customers Buy," "The Man the Customer Sees," and "You Can Learn from a Miss."

The second volume, which is devoted to the selling of Kelvinator products, is supplemented by six black and white films entitled: "The Extra Value of the Kelvinator Refrigerator," "Selling the Kelvinator Refrigerator," "The Kelvinator Moist-master," "The Kelvinator Home Freezer," "The Extra Value of the Kelvinator Electric Range," and "Selling the Kelvinator Electric Range."

The fourth and final part of the program is based on a volume devoted to the direction of the sales force.

A very flexible schooling schedule has been developed to carry the program to every possible retailer.

Distributor or zone training managers, who began wholesale training in August, 1945, and who attended a meeting here recently, will conduct schools in their headquarters cities, a Kelvinator spokesman explained.

Now, Here's How It Works



Surrounded by salesmen, H. L. Schmutz, director of sales education for Kelvinator, reviews basic data of the refrigeration cycle as part of a broad training program for salesmen which Kelvinator is launching this fall.



PRECISION MAKES PROFITS
...When you sell Servel*



"2 HOLES IN 1" HELP ASSURE TOP PERFORMANCE

This precision boring machine turns the cylinder bore of two Servel Supermetic compressors at one time in a superbly accurate operation that is repeated in exactly the same way hour after hour.

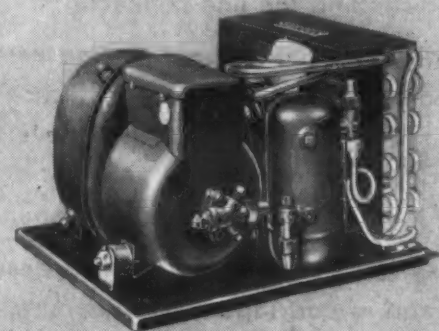
Accuracy is no accident. Cylinder bores are perfectly true, exactly spaced and accurately aligned at a 90° angle to the center of the crankshaft, plus or minus a fraction of a thousandth of an inch. The accuracy of this operation is one of the reasons why Servel condensing units maintain long records of satisfactory service through the years.

Distributors and fixture manufacturers gain decided advantages when they offer their customers Servel Supermetic condensing units. Service costs are lower. So are sales costs, since these units have earned high customer acceptance. Lower costs mean greater profits—and more prospects for repeat sales.

In the new booklet, "Servel Supermetic," you'll find descriptions of these modern units that are designed to fit your condensing unit needs. Mail a postal card for your copy today. Write to Servel, Inc., Div. RN, Evansville 20, Indiana.

*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field

- | | |
|---------------------|---------------------------|
| 1. STORE FIXTURES | 6. ROOM COOLERS |
| 2. MILK COOLERS | 7. FARM FREEZERS |
| 3. HOME LOCKERS | 8. WATER COOLERS |
| 4. BEVERAGE COOLERS | 9. INDUSTRIAL COOLING |
| 5. VENDING MACHINES | 10. VEHICLE REFRIGERATION |



Servel, Inc.
Electric Refrigeration Division, Evansville 20, Indiana

This is one in a series of advertisements featuring the scores of new machine tools and processes now being used to produce Servel Supermetics. Reprints are available to dealers individually or in sets as series progresses.

STOP
REFRIGERANT
LEAKAGE

..... before it
becomes dangerous!

VISOLEAK detects even the smallest leaks before they cause damage to expensive refrigeration systems. Years of use prove it safe, economical, easy to use.

NEW CHARGING SET
The VISOLEAK Charging Set was developed to inject VISOLEAK, add refrigerant oil or re-charge sealed units. For use on all types of refrigeration systems without danger of introducing air or foreign matter.

Charging Set—complete with hoses \$7.50
Filler only—without hoses 6.00
See your refrigeration supply jobber or write for complete information.

WESTERN THERMAL EQUIPMENT CO.
1701 West Slauson Ave.,
Los Angeles 44, Calif.



TROUBLE-FREE

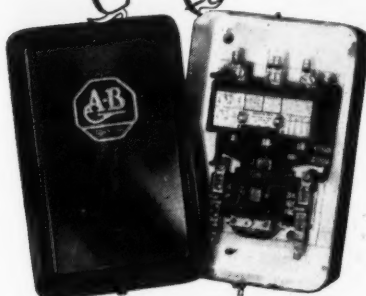
Across-the-Line Starters

The Bulletin 709 solenoid starter is a favorite for air conditioning and refrigeration because it is good for millions of operations and does its job day in and day out without attention. The double break, silver alloy contacts never require maintenance. There is only one moving part—no trouble-making pins, pivots, hinges, or flexible conductors. Write for information.

ALLEN-BRADLEY COMPANY

1313 S. First St.,

Milwaukee 4, Wisconsin



BULLETIN 709

Size 2, Bulletin 709 across-the-line solenoid starter with cover removed.

ALLEN-BRADLEY

QUALITY

SOLENOID MOTOR CONTROL



Ask Your Jobber for
HASCOBILT Parts

**SUCTION and DISCHARGE
VALVE, DISC, REEDS and SPRINGS**

for Conventional and Hermetic Type Compressors

HASCO, INC.

GREENSBORO, N. C.

If your jobber can't supply you, send for illustrated catalog and price list.

MUELLER BRASS CO. SIDE OUTLET STRAINER



Furnished with solder connections
3/8", 1/2", and 5/8" O. D.

REPLACEMENT OF FILTER EASILY MADE

The Mueller Brass Co. Side Outlet Strainer and Filter permits the removal and the replacement of filter or strainer cartridge, without disturbing the line connections.

In changing the cartridge, it is necessary only to remove the cap screws which hold the head firmly in position, then remove the old cartridge and replace with new. In operation, a tight seal is constantly maintained.

A coil spring provides constant pressure against end of cartridge which prevents by-passing of refrigerant between outside of cartridge and inner surface of shell. Car-

tridges are furnished in two types. The strainer type, which is made from 100 mesh bronze screen, and the filter type, which is equipped with an asbestos sack. Both types are protected by two brass strips that run the full length of the cartridge.

The ends are made from heavy brass forgings that are soldered to the shell which is made from hard drawn copper pipe.

The entire assembly is polished and lacquered after fabrication, giving it a neat and workmanlike appearance. ORDER THROUGH YOUR JOBBER.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

Harvester Gets New 11 cu. ft. Freezer In Quantity Production

Firm Plans to Introduce Similar, Smaller Unit Soon

EVANSVILLE, Ind.—International Harvester is now in quantity production on its 11-cu. ft. chest type freezer, Model 11 FC-A, at its new refrigeration plant and will shortly introduce a smaller freezer of similar design, announces E. F. Schneider, manager of the refrigeration division.

Production of several models of household refrigerators is scheduled for next year with future plans of the company calling for early output of two-temperature units and vertical freezers.

The new 11 ft. freezer is powered by a hermetic unit and is finished in Dulux enamel baked on over a Bonderized steel surface. Insulation is hermetically sealed fiberglass. The lid is of the floating type which can be opened and closed or placed in any desired position with no effort—no props, chains, or other obstructions being used, the company claims.

This freezer is the second refrigeration line which the division has turned out of the new factory, which was built during the war for Republic Aviation Corp. Just 27 days after International Harvester obtained title to the plant from RFC on May 16, 1946, milk coolers were coming off the line.

When completely converted, this plant will be one of the largest modern and complete refrigeration equipment plants in the world, believes International Harvester.

There are facilities for laboratory,



At left is Model 11 FC-A of International Harvester's new 11 cu. ft. chest type freezer now in quantity production at the firm's Evansville plant. Powered by a hermetic unit, the freezer has a finish of Dulux enamel baked on over a Bonderized steel surface. Insulation is hermetically sealed Fiberglas. The lid is of the floating type.

engineering, administration, and service building, in addition to large warehouse buildings. The plant is located three miles north of Evansville adjoining the Evansville municipal airport on a 71-acre tract, most of which is surfaced with concrete.

Commenting on the progress made at the new plant, Mr. Schneider said:

"International Harvester has been a successful builder of refrigeration equipment for various types for many years, and while the plant conversion at Evansville has been a very speedy job, you may be sure that the products now coming off of the lines were not speedily developed. Actually years of engineering and laboratory and home testing have preceded the first regular production freezers.

"We are hopeful of maintaining our scheduled production. Everyone knows that is a problem these days. Whether we do or don't attain our production goals, this much is sure, we will maintain International Harvester's well known standards of quality in every product we build."

The company's refrigeration products will be distributed through factory branches to dealers—the same pattern of distribution the company has employed for years.

A general distribution and sales plan for the refrigeration division has been established, and T. B. Hale, vice president in charge of general line sales, says, "We are ready now in the refrigeration division to help our dealers take advantage of an exceptional opportunity."

International Harvester's branch managers from all parts of the country will meet in Evansville Oct. 10 for a presentation of the sales plan, advertising, sales promotion, and service programs.

'Spoilage' Clause Is Ruled 'Insurance' by Arkansas Law

LITTLE ROCK, Ark.—A clause in contracts of certain refrigeration concerns providing for reimbursement of customers for spoilage due to refrigeration failure constitutes insurance under Arkansas law, the attorney general's office held recently. The opinion was in reply to a question of State Insurance Commissioner Jack G. McKenzie.

Mr. McKenzie wrote that under such contracts the customer pays a monthly fee in advance in return for possible reimbursement. The opinion said this protection "is in the nature of an insurance against a contingent loss or liability" and would bring the company offering it "under the insurance laws of the state."

Crider Corp. Turns Out New Condensing Units, Compressors at Lima, O.

LIMA, Ohio—A dozen models of hermetically sealed condensing units and six models of compressors are being produced under the trade name "Saturn" by the recently organized Crider Corp. here, announces T. J. Crider, president and general manager.

These models include both single-stage and two-stage "Freon-12" units in 1/4 and 1/2-hp. sizes. Compressors and condensing units are available with split phase or capacitor start motors. Three of the 1/4-hp. condensing units are designed for "static" operation, while the balance of the condensing units are fitted with fans. All of the condensing units are available for expansion valve, capillary, or high side float controls.

Chief among the numerous features claimed for this new line of compressors is the two-stage design, which, according to the company, permits: (1) reduction in final discharge temperature, (2) lowered horsepower requirements, (3) increase in volumetric efficiency, and (4) reduced maximum loads on bearings and pistons.

Path of the refrigerant vapor through the compressor is said to prevent oil slugging without causing oil entrainment.

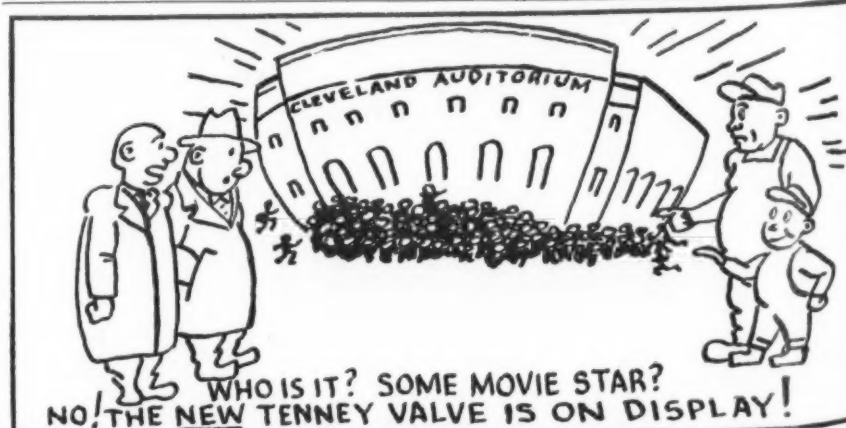
Oil is supplied to main and connecting rod bearings by a scoop type pump through drilled holes in the crankshaft.

Because the motor housing is pressed into the electric arc welded steel shell which encases the unit, direct thermal contact is provided to the shell and extended surface to cool the motor, the company points out.

Suction and discharge valves are of one piece spring steel cantilever type construction having large seat area and low lift to provide long life and efficient operation.

New Electric Appliance Dealer Set Up In Dania, Florida

DANIA, Fla.—Service Electric Co., Inc., this city, has just received a charter to deal in electrical appliances. The authorized capital stock is 200 shares, no par value. The principals include J. A. Blitch, Edwin A. Hadden, Albert Hougen, K. Kougen, and Lee W. Keeler.



WHO IS IT? SOME MOVIE STAR?
NO! THE NEW TENNEY VALVE IS ON DISPLAY!

Visit Booth 310—Cleveland Auditorium—Oct. 29-Nov. 1



TENNEY ENGINEERING, INC.

26 Avenue B • Newark 5, N. J. Telephone: BIGELOW 8-3905

Manufacturers of Automatic Temperature, Humidity and Pressure Control Equipment

INSIDE DOPE

By GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Well, you can prove anything by the Bible.

But if you haven't much to do this evening, and want to stir up some trouble, just quote the above passages to your wife.

Due Acknowledgment

To change the subject, we'd like to acknowledge here and now that "Inside Dope" isn't a man who sees all, knows all, and remembers all. Many times the conductor of this column has taken bows for research work done by Editorial Assistants Lorraine Major and Frances Weed.

Take the Sept. 30 column, for instance—a piece which was packed with reminiscences about what Americans were doing, reading, singing, and excited about in September, 1926.

Many subscribers have written us about that column—telling us that they enjoyed it because it revived fond memories, and congratulating us for remembering so much.

Frankly, friends, our memory isn't that good. Our Miss Weed did most of the preparatory work for that column, and deserves much of the credit for it.

Both Miss Weed and Mrs. Major wrote historical articles for that Sept. 30, Twentieth Anniversary Issue. Mrs. Major's review of early refrigeration news appeared on page 43 of that issue, and a very cleverly written story it was, too. Unfortunately, Miss Weed's story was crowded out of the last form to go to press because of the arrival of an unexpected news story. (News takes precedence over articles in this weekly publication.)

Because her story has significance, we'd like to present it here:

By Frances Weed

DETROIT—When F. M. Cockrell launched **ELECTRIC REFRIGERATION NEWS** in September, 1926, he pioneered a new form of business journalism. Previously, all trade and industrial publications had been magazines. Mr. Cockrell introduced the business newspaper to the world of commerce.

New employees of the NEWS's editorial department are told, with pride, that they are working for the nation's oldest industry newspaper. And those of us who join the company are also filled with enthusiasm for upholding the newspaper tradition of writing briefly, interestingly, and accurately.

First issue of the NEWS was strictly a one-man job, according to veteran employees. Mr. Cockrell wrote all the stories, concocted all the headlines ("writing headlines is akin to writing poetry," the journalism professors say), and bullied the make-up through the hands of uncooperative printers.

To a person who looks over this issue for the first time, it seems obvious that it was packed with interesting news for the industry in those days. From the pages of that initial issue the following items have been condensed to show you what we mean:

"National Educational Plan Approved By Electrical Leaders" (headline). Representing all branches of the electrical industry, 250 men and women attended a conference charged with designing a campaign to educate the public to a fuller appreciation of electricity as "a way to better living."

J. Robert Crouse, president of Nizer Corp., was awarded the first James H. McGraw "Medal for Cooperation" for his work in promoting the organization of the Electric Refrigeration Council.

Thomas A. Edison expressed a high opinion of the electric refrigeration program sponsored by the Society for Electrical Development in a telegram to J. R. Crouse. "It has been placed upon the high plane it deserves and is another manifestation of the wisdom displayed in the founding and continuance of the S. E. D.," declared Edison.

Fourth meeting of representatives of six leading manufacturers of electric refrigerators (Kelvinator and Nizer divisions of Electric Refrigeration Corp.; General Electric Co.; Servel Corp.; Copeland Products, Inc.; and Delco-Light Co.) convened at Waldenwoods, Mich., to consider the extension of their joint publicity and advertising program and to perfect organizational details of their trade association.

A bright new Plan Book for the electric refrigeration industry—prepared by the S. E. D. for presentation to the groups which met at Association Island and Waldenwoods—met with appreciative approval. This Plan Book was divided into five sections:

1. How to organize a local cooperative Electrical Refrigeration Program.

2. Explanation of the \$15,000 local test program designed to create a greater demand for electric refrigeration in Cleveland.

3. A compiling of advertising and publicity material offered by the S. E. D. for local use.

4. Complete presentation of the \$100,000 National Cooperative Electric Refrigeration Program.

5. Interviews with leaders in the industry on the subject: "The Future of Electric Refrigeration."

Members of the Electric Refrigeration Council's Executive Committee who sponsored this cooperative advertising program included: H. G. Scott, pres., Servel; W. Robert Wilson, pres., Copeland Products, Inc.; A. W. Berresford, executive vice president, Nizer Corp.; and E. G. Biechler, pres., Delco-Light Co.

Stop-the-presses "hot news" (it was a "scoop"): Manufacturing activities of the Nizer and Kelvinator divisions of Electrical Refrigeration Corp. were to be consolidated in a new Detroit plant which, it was estimated, would cost \$5,000,000 to build.

News from the dealers: E. A. Edkins, general manager of the Electric Shops owned by the Commonwealth Edison Co. of Chicago, offered to install a new electric refrigerator in the home of any reliable customer on the company's lines on 30 day trial. He insisted that such trial sales "invariably stuck." After the

trial period, he declared, "you cannot pry them loose."

W. T. Blackwell of the Public Service Co. of N. J., listed prompt service as being the most important factor in building electric refrigerator sales. The news story about his work included examples of how his policy had worked out, and why he was sold on it.

Mason Named Manager of Ohio Appliances Branch

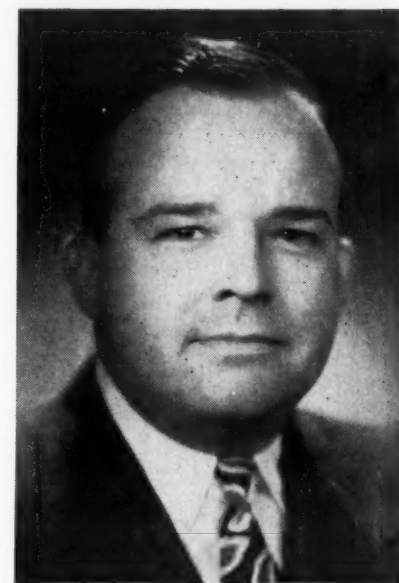
CINCINNATI — Appointment of Tom Mason as manager in charge of the local branch of Ohio Appliances, Inc., has been announced by Vern Bice, general manager.

In his new position, Mr. Mason will be responsible for the merchandising through the retail dealers in the Cincinnati area of all major and traffic appliances handled by the firm.

Included among the products handled are: Coolerator electric and ice refrigerators, home and farm freezers, Blackstone laundry equipment, and the General Mills line of small appliances which will soon sell under the brand name of Betty Crocker.

Ohio Appliances, Inc., covers about two-thirds of Ohio, the southern corner of Indiana, and the northern Kentucky counties bordering on the Ohio river. Offices and warehouses are maintained at Columbus and Dayton, Ohio, as well as here. Headquarters of the organization is at Columbus.

J.E. Hill Takes Over Post With Baker Ice Machine



JAMES E. HILL

OMAHA, Neb.—James E. Hill, who was with the United States Engineers in the Arctic during the war, has been appointed as assistant comptroller of the Baker Ice Machine Co., Inc., it was announced by President Ross Rathbun.

Mr. Hill, who made his home in New York City, has traveled extensively in Europe, India, and Central America.

available again!

TO FRANCHISED DEALERS

FOR IMMEDIATE DELIVERY



NEW

Five Sided Refrigerated Pure Virgin Copper Tank. Refrigerant lines soldered on five sides to copper tank and concealed in walls.

Cabinet Dimensions
65 3/8" x 38 1/2" x 29 1/2"

Total Capacity
14 Cubic Feet.

**saves
SPACE
FOOD
PROFITS
ONLY COOLER
OPERATED EITHER
WET OR DRY!**

Artkraft

Central District Chicago Distributor

BEV-FOOD

COMBINATION FOOD AND BEVERAGE COOLER

This self-contained "plug-in" unit engineered for outstanding performance in any type of store or institution is A MUST wherever foods or beverages are served. Can be used as both beverage cooler and food refrigerator. Has compartment for both wet or dry chilling of bottled and canned beverages. BEV-FOOD is the ONLY COOLER THAT CAN BE OPERATED WET OR DRY. Can be used entirely for dry refrigeration from bottom to top of each compartment. Top opening prevents spill-out of cold.

DIVISION OF ST. NICK'S WORKSHOP INC.

I. R. ROZETT

AND ASSOCIATES
2421 WEST DIVISION STREET
CHICAGO 22, ILLINOIS

EQUIPMENT FOR SALE

Handle the famous Panasonic Refrigerator and refrigeration lines as well as the famous Picoch-Crue Mello-Ized frozen food freezers. Capacity 8 to 40 cu. ft., glass tops and lock and hinges.

Reach-In Coolers and freezers in 16, 20, 30, and 45 cubic foot, all stainless steel interior and exterior.

Any size Walk-In Cooler and Freezer.

Beverage Coolers in 5, 6, 8 ft.

Meat and Delicatessen Cases 4, 6, 8, 10, 12 ft.

Dairy and Vegetable Stainless Steel Boxes in 6, 7, 8, 10, 12 ft.

Bakery Dough Retarders.

Large and medium size Meat Saws.

Blenders, Case Cools and Ice Cube Makers.

Self Service Open Freezer with Wall and Center Canopy.

Soda Fountains, Bob Tails, Sandwich Units & Steam Tables.

Over 100 models to pick from. Immediate delivery out of stock. Write or call. If in New York stop in to see us. Well represented!

COMPLETE REFRIGERATOR SUPPLY
92 7th Avenue
New York 11, New York

They'll Do It Every Time By Jimmy Hatlo



Out With Special Privileges--Revise the Wagner Act!

...Specially designed—ready NOW

TWO SPARKLING NEW

WHITING HOME FREEZERS

MODEL F-2000
Capacious 11 cu. ft. capacity of approx. 365 lbs. Heavily insulated with 4"-5" Fiberglass. Powered by a 1/4 hp. "Packaged Power" sealed unit. Maintains constant zero temperature.

MODEL F-1000
Convenient 4 1/2 cu. ft. capacity ... approx. 165 lbs. Insulated with 4"-5" Fiberglass. Powered by a 1/4 hp. "Packaged Power" sealed unit. Maintains constant zero temperature.

here is why WHITING HOME FREEZERS
... are the homemaker's best buy
... AND YOUR MOST PROFITABLE SALE!

CONVENIENT Just the right size—efficient, square-cornered design permits snug storage of frozen food packages with no wasted space.

QUIET A Whiting HOME FREEZER has no buzz, whirr or vibration... quiet as a kitchen refrigerator.

SIMPLE Whiting HOME FREEZERS contain no "trick" gauges, levers or gadgets to get out of order. Fewer service calls! Require only 14 and 30 ounces of refrigerant respectively.

RELIABLE Maintains a constant zero temperature. Heavily insulated with Fiberglass for extra food protection. Sealed "Packaged Power" unit can be replaced in 20 minutes.

CLEAN The Whiting HOME FREEZER eliminates 98% of the usual condensation—banishes messy "sweating" and frosting.

RUSTPROOF The entire freezer unit is rust-proofed throughout—including the sturdy hardware and bright trim.

BEAUTIFUL Attractively designed for the most modern kitchen plans. Table top height gives it additional kitchen utility.

WARRANTED Backed by the 62-year international reputation of one of America's great industrial companies—the Whiting Corporation.

"COLD FACTS" on a Hot Sales Opportunity . . . write

WHITING

the new GREAT NAME in Home Freezers

FIRST NATIONAL BANK BUILDING, CHICAGO 3, ILLINOIS

Trade Mark
registered
U. S. Patent
Office:
Est. 1926

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD



Copyright
1946,
Business News
Publishing Co.

F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Randolph 0824.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$4.00 per year; 2 years for \$7.00. All other foreign countries: \$6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, Editorial Director

C. DALE MERICLE, Associate Editor
JOHN SWEET, Assistant Editor
ROY DENIAL, Assistant Editor
HUGH MAHAR, Assistant Editor
GEORGE HANNING, Assistant Editor
Editorial Assistants: FRANCES WEED,
MARCELLA PRICE, AND LORRAINE MAJOR.

E. L. HENDERSON, Business Manager
ELIZABETH SMITH, Assistant Bus. Mgr.
MACIL STEPHENS, Asst. Adv. Mgr.
ROBERT M. PRICE, Adv. Representative
ALLEN SCHILDHAMMER, Adv. Rep.
WALTER J. SCHULER, Production Mgr.

Member, Audit Bureau of Circulations. Member, Associated Business Papers

VOLUME 49, No. 7, SERIAL No. 917, OCTOBER 14, 1946

Proposal: Let's Have a National Strike Month

NOT long ago we tried to interview a number of strikers at the Briggs plant here in Detroit. Several hundred had walked off the job because a union steward had been fired. That walk-out threw several thousand other Briggs workers out of work, and soon closed up the Ford Motor Co., which Briggs supplies with automobile bodies.

Finally we got one of these strikers to stand still long enough to answer this question:

"What does this get you? You not only stop the paychecks of many, many thousands of innocent laboring men over a petty quarrel with which they aren't concerned, and which they don't understand, but you lose money yourself. What does it get you?"

"Are you nuts?" responded this interviewee. "Briggs is losing more money than we are."

That "we'll-make-the-boss-suffer-if-it-kills-us" attitude probably is a major cause of strikes. As we have noted before, when a man goes out on strike, he is proclaiming his power to spit in the boss's eye. That makes him feel good all over. The fact that he inevitably loses by this indulgence of his vanity makes no difference. He wants to do it because it gives him a feeling of power.

Why not, then, recognize the strength of this observation about human nature? Employees love the opportunity to assert themselves in conflicts with employers, whether they have valid grievances or not. Striking, then, becomes grand fun. All right:

Let's proclaim a National Strike Month. Let it be January, for instance. Every union which wants to strike goes out shouting defiance and singing hosannas on Jan. 1. In the meantime, their leaders will try to negotiate a new contract with the hated bosses. All strikes which haven't been settled by Jan. 31 automatically would then be referred to a Court of Arbitration whose decision would be final.

Then we could all get back down to work again. Of course, this is probably a silly and impossible proposal. But even though it is presented tongue-in-cheek, it makes more sense than does the haphazard, one-strike-after-another situation which has held America back during all of 1946.

Not long ago we re-read the Wagner Act. Believe it or not, in its preamble, it proclaims itself to be "an Act to prevent strikes." What a laugh! What a grisly laugh!


Even biased Department of Labor statistics do not speak well for the Wagner Act in this regard, because they reveal that strikes increased three-fold after passage of this unfortunate Act.

During the 11 years from July 1, 1924 through June 30, 1935 (the pre-Wagner Act era) 11,830 strikes were called, affecting a total of 5,919,484 employees. During the following 11 years, from June 30, 1935 through June 30, 1946, there were 19,354,519 workers involved in 38,521 strikes.

There are several reasons which explain this multiplication of strikes after the Wagner Act was passed. One of these is the growing number of potential strikers (factory employment increased from 7,358,000 workers in 1930 to 11,403,000 in 1946). Another potent factor is the additional power which the Unions have assumed under the benevolent wing of the Wagner Act (which should have been entitled: "An Act to set up tax-free, above-the-law labor monopolies").

Having learned that they can usually win strikes in which the settlements are Government controlled, the Unions have become frighteningly arrogant.

The power to strike—under the Wagner Act—has now become the power of a few to starve the millions.

Your service work is easier...
BECAUSE  REFRIGERATION VALVES ARE DEPENDABLE



**WHEN YOU NEED FASTER, CLOSER, MORE
 ACCURATE CONTROL OF EVAPORATOR PRESSURES**

USE **MODEL 235-S SUCTION PRESSURE REGULATING VALVE**

Once you've used the A-P Model 235, you'll call it "indispensable" on any system where you must maintain closer-than-ordinary control of evaporator pressures. Installed at the end of the evaporator, this special valve maintains a constant evaporator pressure regardless of changes in load or variations in suction pressure on the outlet side of the regulating valve. *There can be no variation in pressure — or box temperature — because of its instantaneous response to pressure changes.*

Exclusive Adjusting Feature

Model 235-S can be adjusted to proper setting **IMMEDIATELY**, with the handy adjusting knob, and collar graduated in pounds pressure from 0" vacuum to 40 pounds — *no waiting for system to settle down.* No other valve has this time-saving feature.

You'll find the Model 235-S Suction Pressure Regulating Valve particularly valuable where two or more evaporators must be operated at different temperatures with a single condensing unit, as in multiple installations. Installed on the warmer evaporator, the valve can be quickly adjusted to the required pressure of each by means of the top adjusting knob. Of the "throttling" type, it tends to close off gradually, producing no sudden change to cause erratic operation of the balance of the system.

Put this valve on your next multiple system and watch it quickly go to work steadying those fluctuating pressures to new accuracy. Your jobber has the Model 235-S in stock — or write for bulletin M-110.

MODEL 235-S

Suction Pressure Regulating Valve. Capacity, up to 1/2 ton Freon, 3/4 ton Methyl or Sulphur. Adjusting range — 1" to 40 pounds. For flooded, semi-flooded, or dry expansion type systems.

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street • Milwaukee 10, Wisconsin
 Export Dept., 13 E. 40th St., New York 16, N. Y.



DEPENDABLE *Refrigerant Valves*

Stocked and Sold by Good Refrigeration Jobbers Everywhere . . . Recommended and Installed by Leading Refrigeration Service Engineers

MARVEL

Dry Beverage Coolers

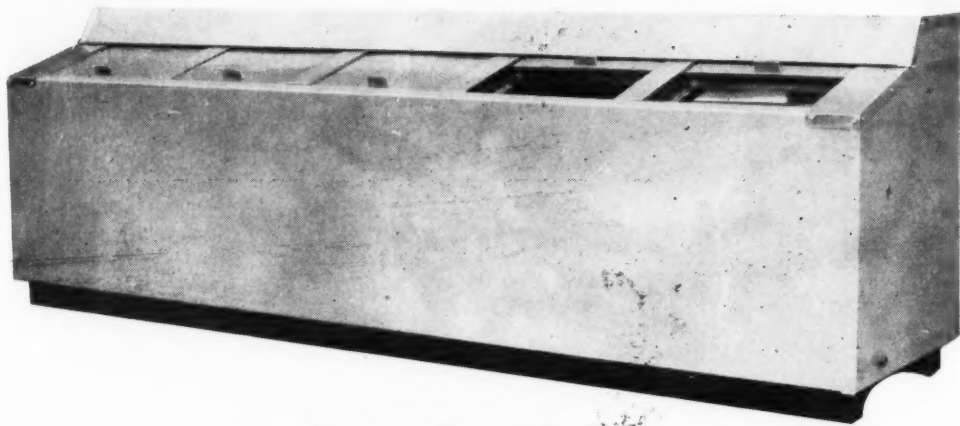


Illustration Shows 10-Foot Cooler

The MARVEL BEVERAGE COOLER gives maximum capacity and appearance at minimum cost.

Give your customers what they want now!

SPECIFICATIONS

- **FINISH** Beautiful stainless steel and polished aluminum or baked paladin gray enamel.
- **CONSTRUCTION** Rugged. First quality materials only.
- **COILS** Fin-type gravity coils front and back. Designed and placed to give fastest cooling and least frosting.
- **INTERIOR** Aluminum, removable dividers. Utility shelf.

Available Now

For Franchise Write, Wire, or Call TODAY

H. P. RANDALL MANUFACTURING CO.
DIVISION OF W. ALLEN ROGERS INDUSTRIES

Box 272-1

DEMOPOLIS, ALABAMA

Telephone 272

Clean Condenser, Motor Parts, Controls In the Fall Air Conditioning Shut-Down

Editor's Note: Following is the concluding article covering a recent talk by M. B. Goddard of Carrier Corp. in which he describes an efficient method of making the fall shut-down of an air conditioning system.

Part 2: Avoiding Freeze-Up

During the fall shut-down special attention must be given to condensers, especially if they are the water-cooled or evaporative types, he added. If the surfaces are scaled they should be cleaned. If water-cooled condensers won't be subject to freezing temperatures they may be either left filled with water or drained.

It is most essential, however, to take extra precautions if there is any possibility of freeze-ups. One method is the complete drainage of the condenser. Ordinarily surface tension of the water in small tubes of modern condenser prevents complete drainage by gravity alone. Mr. Goddard recommends that this residual water be blown by a high volume of air—50 to 100 c.f.m.—under 2 to 5 lbs. pressure. Industrial type hand blowers or combination blowers and vacuum cleaners will probably do this best.

A non-corrosive, non-volatile, anti-freeze solution may also be circulated through the coil or tubes to prevent freeze-up.

"The condenser water regulating valve should be taken apart and cleaned out," suggests Mr. Goddard. "The valve seats and seat discs should be examined and replaced if necessary. It is a good idea to leave the valve out of the line during the winter, particularly on jobs subject to freezing, to prevent accidental refilling, and overhauling of the valve can therefore be done in the shop at your convenience."

"Evaporative condensers should be completely drained and the pans washed out. The circulating pump should also be drained or dismantled to remove all water, and the impeller, stuffing boxes, couplings, etc., inspected as some parts may have to be replaced."

"The makeup water line should be drained if subject to freezing temperatures, as is usually the case. If there is a strainer in the makeup line it should be opened up and cleaned to insure removal of all water," continued Mr. Goddard. "The shutoff valve in the water makeup line should be of the stop and waste type. If it is not, it is often advisable to disconnect the makeup line at the valve to prevent accidental refilling."

Cleaning the Motor

Pump and fan motors of the evaporative condenser, and the motor which drives the compressor should be inspected and any dust or dirt blown out. Motors with oil-soaking windings should be sent to a motor repair shop. These with brushes and commutators may need new brushes or resurfacing of the commutators. Dirty or discolored oil in the bearing wells should be changed and the wells flushed out. Finally, it would be wise to cover the motors to prevent accumulation of dust during the shutdown period.

Fan belts on evaporative condensers ought to be removed and stored indoors, says Mr. Goddard. The fan and shaft assembly itself may be rusty or scaled up, which would require cleaning, scraping, and repainting. It is also well to check the assembly for balance and vibration. If ball bearings are used, make sure that the inner race is securely fastened to the shaft as a loose bearing may start to turn on the shaft and wear it out.

"The condenser pan and casing should be inspected for rusting or pitting and will usually require

scraping and painting with a good metal-protecting paint. The spray nozzles should be cleaned and the spray piping flushed out or brushed out. The eliminators between the sprays and the fan should be inspected for scale or rust and may have to be painted or replaced. Lastly, the air inlet and outlet covering should be closed up with canvas, wood, or composition board to exclude snow and trash."

Whether they are of the unitary type or are built up of fans, coils, etc., the air conditioners themselves should receive the same attention as given evaporative condensers, advises Mr. Goddard.

In addition, cleanable or automatic air filters should be overhauled and put in good shape. Throw-away filters should be replaced. Occasionally you will find that enough dirt and lint will get past the filters to obstruct the air passages through the coils. This is especially true in restaurants or similar locations where a certain amount of greasy vapor is present in the air. It may, therefore, be advisable to thoroughly wash down the coils by spraying them with a hot cleaning solution.

"Many air conditioners use water coils, either for precooling or as the main cooling medium. In such cases, it must be determined whether there is any possibility of their being subjected to freezing temperatures during the winter months. If so, the coils should be drained and blown out, or flushed out with a non-freeze solution as described for water-cooled condensers. This is very important as it is very difficult to hold the goodwill of a customer whose coils spout water like a fountain when the plant is turned on in the spring."

Overhauling the Controls

Careful inspection and overhauling of controls, including motor starters, is another essential. Contact points should be cleaned or replaced if badly burned. If the control system is complicated it may be advisable to call in a service man from the manufacturer of the controls, he suggests.

A little further attention is required for year-around air conditioning systems.

"Some type of freeze-up protection is usually provided for winter air conditioning systems. This may be a thermostat located ahead of the heating coils and acting to close the outside air damper or shut off the fan if the air temperature is dangerously low. The performance and calibration of this thermostat and the apparatus it controls should be checked so that proper protection is assured."

"The work involved during the spring startup depends to a considerable extent on how well you have done your job during the winter," contends Mr. Goddard. "Mainly it is a matter of reversing the shut-down procedure."

"When replacing belts they should be carefully lined up and adjusted for proper tension. The plant should be operated and the setting of controls and expansion valves rechecked. You should make sure that there is sufficient refrigerant and oil in the system, and that all motor bearings are lubricated."

"Check the water valve on water-cooled condensers to be sure that it is supplying an adequate amount of water and that it closes off properly when the compressor stops. If the water can be expected to warm up during the summer, the valve should be adjusted for a somewhat lower head pressure than normal to compensate for the increased water quantity that will be needed later."

"This is our New trade mark!" says THE LEHIGH TEAM

Lehigh

BLU-COLD

COMMERCIAL REFRIGERATION

Engineering Production Management

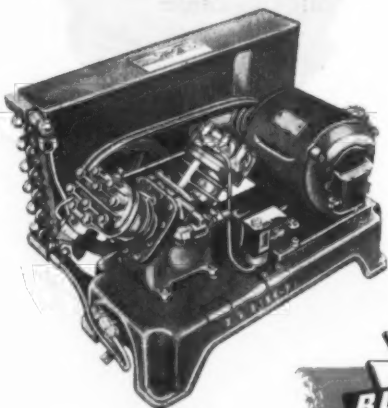
- The same fine Lehigh precision construction. The same smooth-running, powerful, compact units—but with Lehigh's own new label—Lehigh BLU-COLD. We hope you see a lot of it!

And Don't Forget **BOOTH 416**
Cleveland, October 28—November 1 at the **BIG SHOW!**

The WELCOME MAT is out for you—and all your LEHIGH friends will be there.



Lehigh Mfg. Co., Inc. PLANT: LANCASTER, PA.



We Manufacture XL
'Freon' Compressors and Condensing Units (1 to 10 h.p.)
Ammonia Compressors 4x4 — 5x5 — 6x6
Ammonia Valves 1/4" to 3" Screwed and Flanged
ALSO
Ammonia Flanges—Strainers—Discharge Check Valves
AIRCRAFT PRODUCTION ENGINEERS
DIVISION OF
THE XL REFRIGERATING CO.
1834-42 WEST 59th STREET CHICAGO 36, ILL.



'140 MILLION AMERICANS COULD BE WRONG, TOO'

Perfex Corp.

Editor:

During all the time that you were receiving the avalanche of letters on your "Wake Up America" editorial, I did not feel it necessary to add mine. Not that I did not agree with you; the great rank and file of Americans are suffering from abuses of the power that has been allowed to drift into the hands of a few labor leaders who, in too many cases, are using their unions to serve their own selfish, individual advancement or enrichment, or are influenced by anti-Americanism.

You have written another outstanding editorial, your reply to Rev. Gilmartin. Now, I want to be among the first to congratulate you, for this time you have written in an even finer, loftier spirit. But you will probably not be deluged by plaudits as you were before. The former editorial was militant and denunciatory and drew enthusiastic and loud acclaim; the latter was gentler and less likely to arouse ardent applause.

Your appeal to Rev. Gilmartin was to love of liberty, and to faith in the principles that have made this the greatest nation of all time. It recalled him to his true office as apostle of brotherly love, peace on earth, good will toward all men. Like him, too many of the cloth are following false gods; many are merely weak and ineffectual. Formal religion has lost its leadership of men's thoughts and motives.

We are in a period of doubt and unbelief. We have come to disbelieve many of the superficial tenets of religion, those differences that set one creed apart from another. Under this disbelief the true essence of religion, man's love for his fellow man, has been momentarily buried. It needs to be resurrected and again made the banner of civilization.

We are restless and impatient. We fret because our moral, spiritual, and economic progress has not kept pace with our amazingly rapid industrial and scientific progress. We try old systems in new guises without first evaluating them. We follow those who promise us short-cuts to Utopia.

All sorts of propaganda assaults us, through every medium, from every ism. Small wonder that we have lost

sight of the truths on which Washington, Jefferson, Franklin, and others of that glorious company (the equal of which mankind has never known) built the world's most successful system under which men can live amicably and prosper together.

The principles and plan of that system need to be resold to us. We need to rededicate ourselves to the task of perpetuating the heritage passed down to us. We must be vigilant. Forty million Frenchmen were wrong, 140 million Americans could be wrong, too.

It was only a few years ago that we complacently assured ourselves, "There are only a few communists in the United States, a noisy handful; nothing to worry about." Through apathy toward our internal enemies, and absorption in our "business," we could lose here at home the liberty for which our fathers, sons, brothers fought and died on foreign shores.

PAUL B. REED, Manager,
Refrigeration Controls Div.

IF YOU THINK THE U. S. HAS TOO MANY CONTROLS . . .

H. W. Clarke, Ltd.
42-46 Cable St.
Wellington, C. 3
New Zealand

Editor:

We are pleased to be able to send you a Catalogue on Refrigeration and Air Conditioning which we have recently produced and we hope some of the names in this Catalogue will recall to your mind the most pleasant visit we had from you so many years ago.

Not unnaturally, during this last few years, we have had little time except for essential work and we may say that the Commercial Refrigeration Industry has come through the War period very well, but some of the groans and squeals that are put up in the REFRIGERATION NEWS really make us laugh because you have to come to New Zealand to know something about Controls and Regulations.

We are sure that our people can think up more, better, and quicker ways of stopping anyone from getting on with the job, than anywhere else in the World.

Like most other people, New

Zealand is suffering very much from a shortage of various basic or raw materials and the labour problem is, of course, ever with us.

We hope that it will not be too long before somebody is up in your territory and possibly can spend a few minutes telling you about some of your very good friends in this country.

With kindest personal regards.
P. D. EDWARDS

STORY IN NEWS BRINGS MANY VISITORS TO FIRM

Lee Shell Co.
1141 W. Madison St.
Chicago 7, Ill.

John O. Sweet
Assistant Editor

I want to take this opportunity to thank you for the nice article you wrote about us in your AIR CONDITIONING & REFRIGERATION NEWS. You seem to have grasped the meaning of our operation as though you yourself were in this business, and you are to be complimented.

Since this article appeared, we have had at least a dozen visitors who came from various parts of the country to look over our operations. We took them through and they were very well pleased and in every instance they are going to make some changes in their operations, using ours as a pattern.

If you happen to have at least six (6) copies of the paper that you can send us, we will greatly appreciate it and of course will be glad to pay for them.

Again thanking you, I am
I. W. SHELL

WHO IS IT? SOME MOVIE STAR?
NO! THE NEW TENNEY VALVE IS ON DISPLAY!

Visit Booth 310—Cleveland Auditorium—Oct. 29-Nov. 1

TENNEY ENGINEERING, INC.
26 Avenue B • Newark 5, N. J. Telephone: BIGELOW 8-3905
Manufacturers of Automatic Temperature, Humidity and Pressure Control Equipment

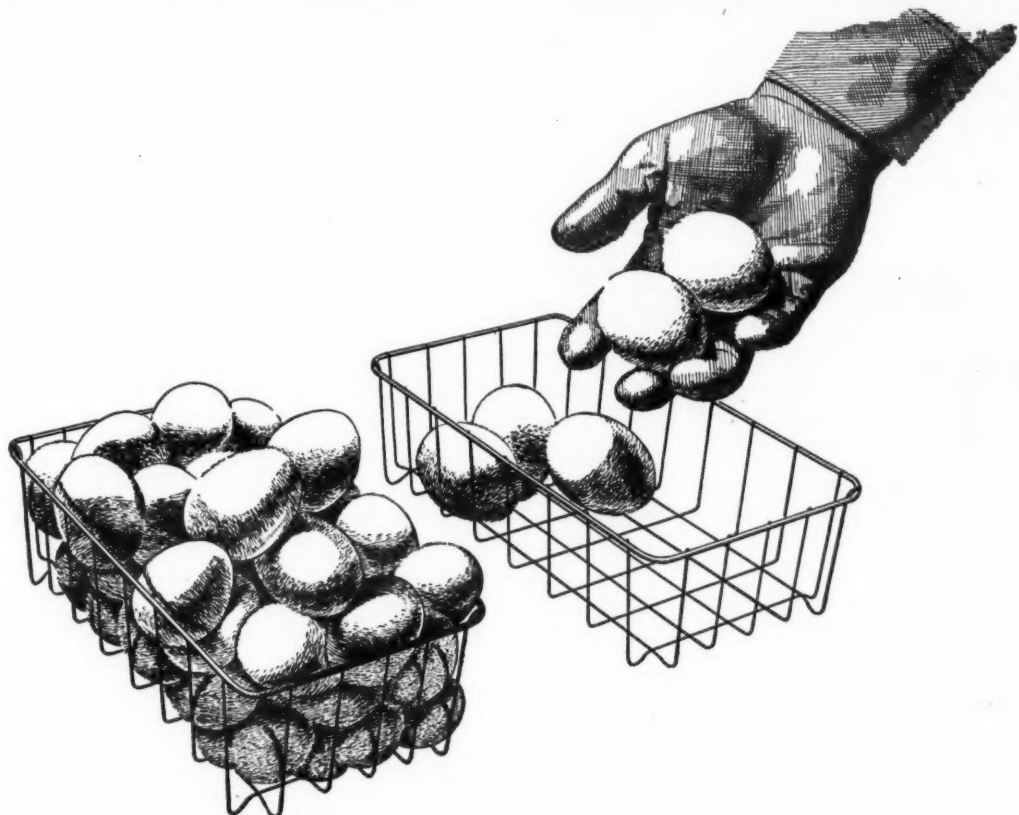
wanted!

REFRIGERATION & AIR CONDITIONING DEALERS and CONTRACTORS

to handle line of self-contained one to fifteen ton air conditioning units for exclusive manufacturing distributor. Immediate delivery.

OPPORTUNITIES for exclusive franchise dealerships in the following territories: Washington, D. C., Maryland, New Jersey, Delaware, Eastern Pennsylvania, New York state and New England.

Address Inquiries to Box 2091
Air Conditioning and Refrigeration News



You can spread the Risk

Insurance people do it all the time. Every huge risk is spread . . . underwritten once, perhaps twice or even three times.

And you can spread the huge risk that faces every marketing manufacturer today . . . over-expansion. You can do it by contract manufacturing . . . by turning over to a reliable production firm the production not best suited to your own plant program. For this insurance, you do not pay a premium.

Hupp is one of the largest contract manufacturers in the country. For

years, we have been delivering low-cost, quality work . . . quickly in quantities . . . and to some of America's best-known industries.

In Detroit and Cleveland—centrally located in the nation—we have proven facilities for machining, for stamping and for assembly, to your specifications. You can call on us for a part, a sub-assembly, or a complete product, ready for market . . . and at a realistic price.

If you want to keep your position and your share of customers in

today's booming market and at the same time, maintain liquidity of working capital, CALL HUPP—AN EXPERIENCED CONTRACT MANUFACTURER.



ONE IN A SERIES OF ADVERTISEMENTS PRESENTING THE HUPP PLAN FOR INDUSTRIAL STABILITY



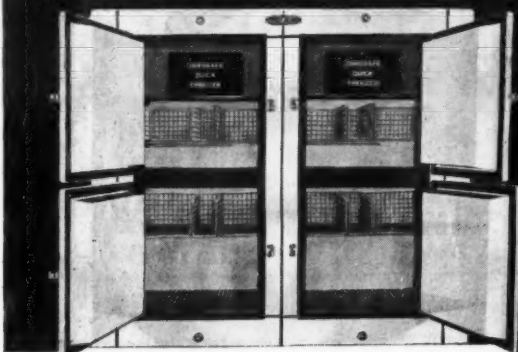
He's Doubly Sure . . . with a PENN!

No faulty water valve imperils his refrigeration installation. This service engineer uses a PENN—the water valve that's different and better. Consequently, rust, corrosion and sedimentation pose no problem. In a PENN valve, the range spring and sliding parts are never submerged in water. Long life and dependable performance are assured.

Get all the facts on this new type water regulator. It's built in two styles—flanged and threaded—in a wide range of sizes to fit your specific need. Write for Bulletin R-1986A. There is no obligation. Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

PENN
AUTOMATIC CONTROLS
FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

SINCE 1939...ZEROSAFE by WILSON



WILSON ZEROSAFE FARM FREEZER
Sectional Model FF-60

FOR FRANCHISE INFORMATION ADDRESS DEPT. II: WILSON REFRIGERATION, INC., SMYRNA, DELAWARE

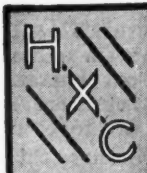
THE GREAT NAME IN FREEZER DESIGN

SINCE 1939 Wilson ZEROSAFE has been the greatest reach-in farm freezer in America... THE NEW WILSON ZEROSAFE IS NOW GREATER THAN EVER BEFORE... Not a toy, but big, ruggedly beautiful, efficient, with stamina for years of low-cost operation.

SIZES FOR EVERY NEED
FROM 15 TO 120 CU. FT.

HIGH SPEED

LOW COST



WATER and LIQUID COOLING... with the HEAT-X CAST ALUMINUM COOLERS



HEAT-X Coolers are supplied in various capacities so that your precise requirements will be fulfilled.

HEAT-X Features: No freeze-up damage... More BTU's per watt... No short cycling... Small refrigerant charge... Assured sanitation... Operates in any position... Small space required... Low initial cost... Long life.

See Our Display
at the
Cleveland Show
Booth 426

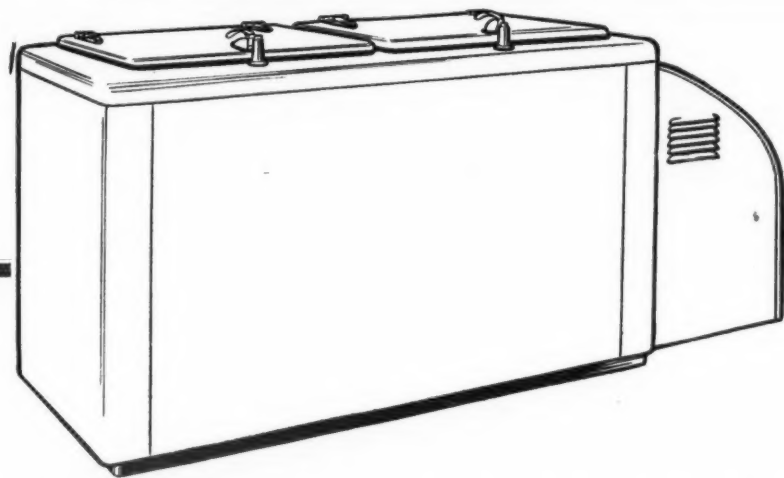
The industry has waited and hoped for a lowside product such as we offer combining top performance and little cost. It is an instantaneous cooler, but with block holdover sufficient to prevent short cycling and to maintain uniform outlet water and liquid temperatures with intermittent flow.

Write at once for Heat-X Engineering Specifications and Capacity Tables

Orders Promptly Shipped



THE HEAT-X-CHANGER CO., INC.
415 Lexington Avenue, New York 17, N. Y. Brewster, N. Y.



FREEZER CABINETS

WORTHY OF YOUR BEST EQUIPMENT

SANITARY 12.5 CUBIC FOOT MODELS

AVAILABLE COMPLETE, LESS CONDENSING UNIT

Attractively modern in style, heavily built with steel welded frame, rich in many unusual and exclusive quality construction features, SANITARY Freezer Cabinets are now in production for quantity shipment on a 30-day basis. Each cabinet is complete with freezer plates, cold control and "Freon-12" expansion valve requiring merely installation of your own condensing unit. Typical of SANITARY design and engineering, every detail in these Freezer Cabinets is aimed at long service life, high efficiency in food freezing and storage—at lowest operating costs.

PLACE YOUR ORDER

for these "top quality"
SANITARY Freezer Cab-
inets TODAY.

SANITARY REFRIGERATOR COMPANY

MANUFACTURER

FOND DU LAC, WISCONSIN

Ice Refrigerators For More Than 40 Years
Quicfrez Farm Locker Plants Since 1939

Servicing Truck Refrigeration Units

Instalment No. 3

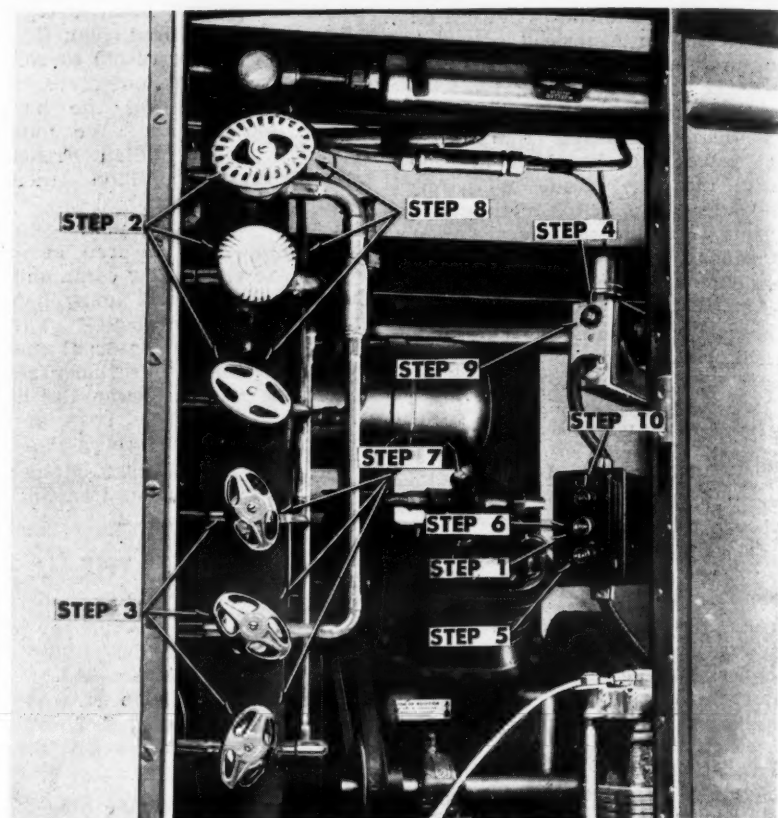


Fig. 5—The Trail-Aire truck unit is defrosted by following the 10 steps as described in the text.

How to Defrost

When the unit is operating on its cooling cycle, it will occasionally be necessary to defrost the upper coil. How often this must be done will depend upon temperature and humidity conditions which are encountered, both within the trailer and outside in the atmosphere. It should be done frequently, however.

The upper coil must be defrosted when it becomes covered with a heavy frost because the frost will act as an insulator. This heavy frost will cause the unit to run continuously as there will be no reduction in the trailer temperature. It is not necessary to inspect the coil to determine if it is heavily frosted. The operator will realize that defrosting is necessary because the unit will run all the time without lowering the temperature within the trailer.

Defrosting is accomplished by the following procedure, performed in the order indicated:

1. Press "Stop" button on the control switch.
2. Close the three top valves (painted white) by turning clockwise as far as they will go.
3. Open the three bottom valves (painted red) by turning counter-clockwise.
4. Move the thermostat knob

pointed at least 10° higher than the trailer temperature as shown on the thermometer.

5. Press "Heat" button on the control switch, making sure that the engine starts. If it doesn't start, move the thermostat knob pointer to a higher temperature where the engine will start. Allow the unit to run for several minutes. While the unit is operating watch for water to run out of the drain line beneath the trailer.

6. As soon as the water, which was frosted on the upper coil, stops running from the drain line, press the "Stop" button on the control switch.

7. Close the three bottom valves (painted red) by turning clockwise as far as they will go.

8. Open the three top valves (painted white) by turning counter-clockwise.

9. Reset the thermostat knob pointer to the original or desired refrigerating temperature.

10. Press "Cool" button on the control switch.

The operation of defrosting is accomplished simply by changing from the cooling cycle to the heating cycle for several minutes. This changes the upper coil from an evaporator to a condenser coil which receives the hot compressed gas from the com-

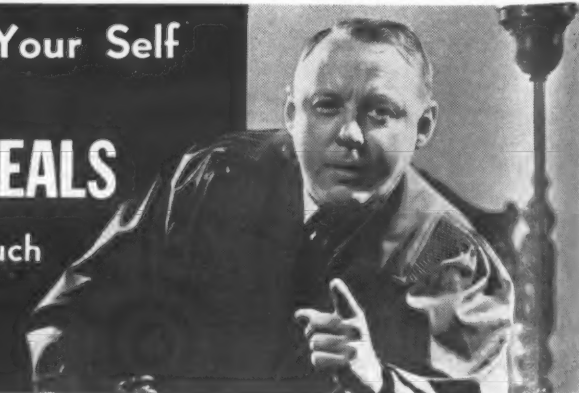
(Continued on next page)

Judge For Your Self

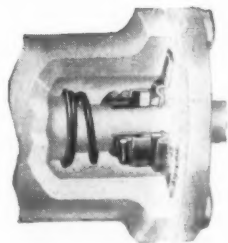
why

ROTARY SEALS

Have Won Such
Widespread
Popularity



The most satisfying way to find out why ROTARY SEALS have won such an outstanding reputation is to install them and see how well they operate. That is all we ask. We know that "if you are the judge" the verdict will be a favorable one. Our case is based on the premise that THE FEWER WORKING PARTS THERE ARE THE LESS DANGER THERE IS OF TROUBLE.



ROTARY SEAL COMPANY

2020 N. LARRABEE ST., CHICAGO 14, ILL.

Canadian Office: 382 Victoria Avenue, Montreal 6, Quebec, Canada

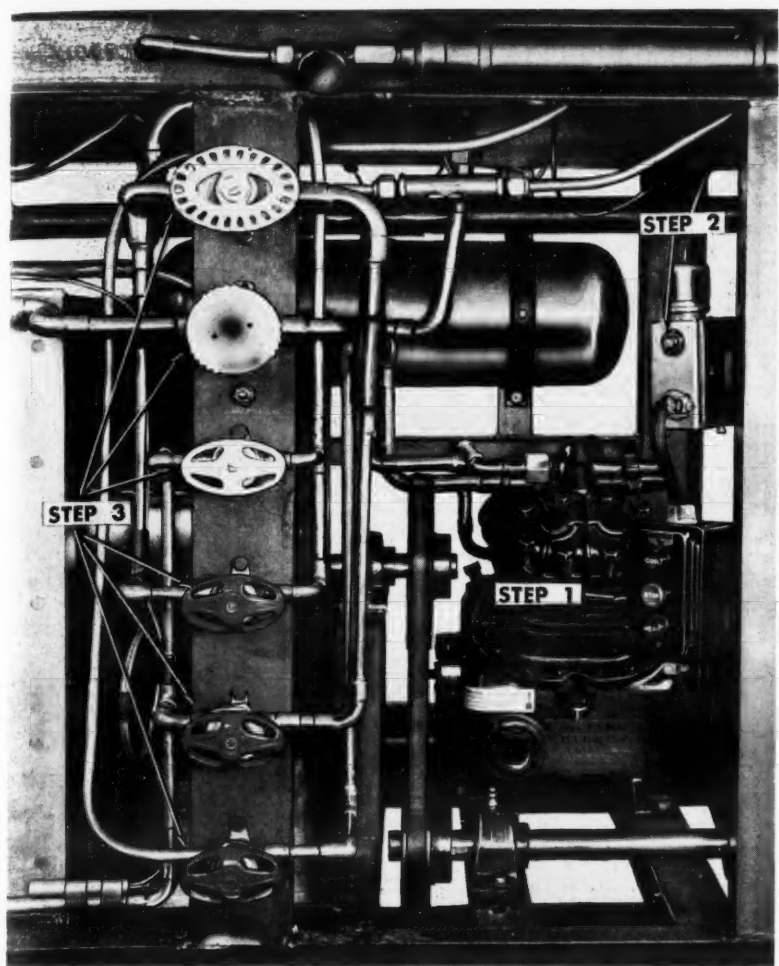
Servicing Truck Units (Cont.)

Fig. 6—All the Trail-Aire hand valves should be closed when the unit is shut down.

(Continued from preceding page)

pressor. The hot gas swiftly melts all the ice present.

If the drain is watched and the unit stopped as soon as all the water melted from the coil drains to the ground, the defrosting is done without appreciably raising the trailer temperature.

How to Shut Down

After the controls have been set to cool, the unit functions automatically. This means the gasoline engine will start and stop by itself in response to the demands caused by changes in the trailer temperature. Therefore, at the end of each trip, or whenever the unit is not needed, it must be shut down, even though the engine may not actually be running at that

instant. To shut down the unit:

1. Press "Stop" button on the control switch.
2. It is not necessary to alter setting of thermostat.
3. Close all six hand valves.

Place a tag on the valves stating that they are closed and must be open in proper sequence before the unit is started up again.

Unit Will Not Run

Make sure that the trailer temperature calls for operating of the unit. Check temperature regulator and valve settings. Reset the circuit breaker on the automatic start control box and see if the engine starter operates. If the engine will not crank refer to "Testing Procedure for Automatic Control Circuit."

Be sure there is an adequate supply of gasoline in the tank. Check the gasoline tank sediment bowl for evidence of dirt and clogging.

Make sure the engine fuel pump is delivering gasoline to the carburetor.

If the engine is receiving gasoline and still will not start, check the ignition system to the spark plugs.

Unit Runs All the Time

When the unit runs continuously on the cooling cycle it may need defrosting. If the upper coil has been defrosted and the unit will not cool (or heat, if it is on the heating cycle) check into the system as follows:

1. Inspect the belt drive system to be sure belts are not broken or extremely loose. If loose, tighten belts to proper tension.
2. Examine strainer and dehydrator to see if they are plugged. Plugging

of these units will be accompanied by the formation of frost on the outside.

3. Inspect the sight glass (above hand valves) to determine if the system is low on refrigerant. The amount of refrigerant in the system is most important. When the unit is low on refrigerant it will neither heat nor cool properly. Remove the pro-

tecting cover plate from the sight glass by unscrewing and watch the glass window while the unit is running. The liquid in this line should pass the window without any bubbles. If bubbles are seen when the trailer temperature is below 50° F., the system may be low on refrigerant.

(To Be Continued)

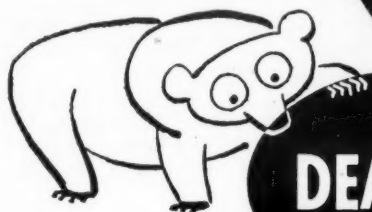
LOOK FOR THESE---WHEN BUYING REFRIGERATION & AIR CONDITIONING SUPPLIES

- ★ One Stop Supply Service ★ Complete Stocks ★ Fast Delivery
- ★ Friendly, Courteous Service ★ Helpful Engineering Advice
- ★ Easy to use Catalog ★ Strictly Wholesale Prices

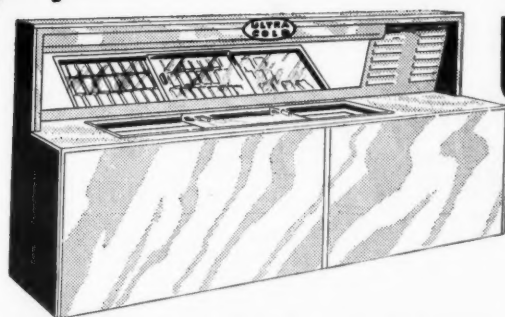
PLUS 17 years experience serving the Refrigeration and Air Conditioning Industry exclusively.

CHASE REFRIGERATION SUPPLY COMPANY

546-48 West 119th St., Chicago 28, Illinois



handle this
proven, fast selling FREEZER!



ULTRA COLD

- Full-vision Lucite Tops
- Triple Insulation
- Fluorescent Lighting
- Display Mirror
- Durametal Construction

24 Models to
Choose from
A design for
every customer.

MAXIMUM TRADE DISCOUNTS . . . CHOICE TERRITORIES STILL OPEN
IMMEDIATE DELIVERY

WRITE FOR INFORMATION
AND PRICES

CARL-CRAFT COMPANY

Refrigeration Division

4113 West Jefferson Blvd., Los Angeles 16, Calif.

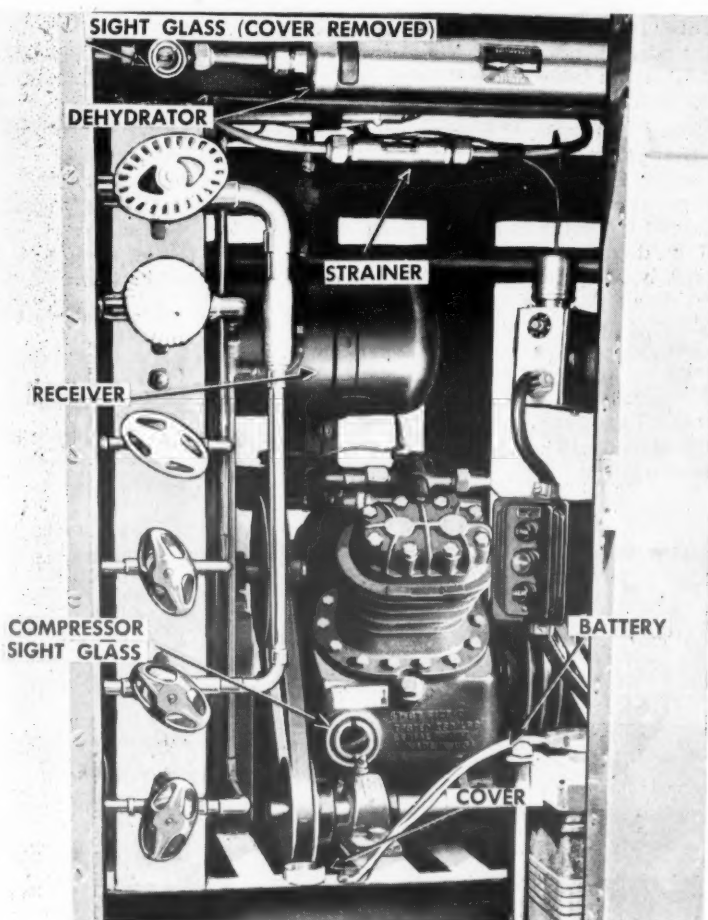
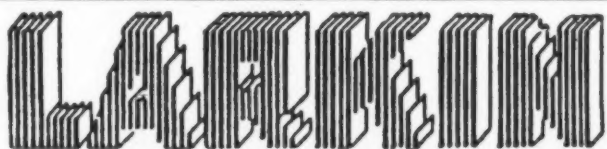


Fig. 7—This close-up shows the location of the sight glass, dehydrator, strainer, receiver, compressor sight glass, and battery for the gas engine.



The
Watchdog
of the
Nation's Food
Supply

**MECHANICAL REFRIGERATION**

Larkin Products Include—
Hum-Temp Forced Convection Units—Patented CROSS-
FIN COILS—Bare Tube Coils—Disseminator Pans—Heat
Exchangers—Evaporative Condensers—Instantaneous Water
Coolers—Zinc Fused Steel Plate Coils—

See Your Jobber or Write Direct:

LARKIN COILS, 519 Memorial Dr., S. E., Atlanta, Ga.

Now! ORDER MONDAY — GET FRIDAY HANDEES (WHO HAVE SOLD OVER 10,000 TRUCKS BY MAIL) OFFER A NEW Dual Wheel Refrigerator & Appliance TRUCK

Also for Furniture, Crates, Boxes, Cartons

THIS new dual wheel truck rolls as easy as a baby buggy. The 4 big resilient rubber tires contact floor at 4 points, giving truck a firm base, making heavy objects easier to load, easier to roll, easier to handle. No strain on arms of operator because (due to the 4 large wheels) there is no tendency to side-pull, side-tip, nor will it "slew" around when some small obstacle is run into on the floor.

Try at our risk. You will find HANDEES dual wheel truck will greatly reduce the job of handling heavy appliances and bags, and cases, cartons as well. Over 10,000 HANDEES trucks have been sold by mail. Less than a dozen of them have come back on our simple guarantee, "Send back any HANDEES truck collect if it doesn't fit your needs." Order by mail with full confidence of satisfaction or your money back.

Specifications: Model 88R 1" O. D. tubular steel frame. Ht. 54"; nose width 24"; 13' web strap; curved cross pieces. Wheels: four 8 x 2 unusually resilient durable rubber. Cap. 1000 lbs.

\$31⁹⁵

HANDEES CO. Dept. 22R
Bloomington, Illinois



Another
New
Handees
Dual
Wheel
Truck

Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

How to Make Use of the Mollier Chart (Part 1)

One of the most useful tools of the refrigeration engineer designing or applying refrigerating equipment is the refrigerant heat chart, also called the Mollier chart after the man who devised it. From it the engineer can get all the heat content information that he can from both the saturation and superheat tables, and get it much easier and more quickly, although not quite so accurately but accurately enough for ordinary purposes.

From it he can directly read the temperature, pressure, volume of the vapor, and the amount of heat in the refrigerant in various places in the refrigerating cycle, in the liquid and saturated and super-heated vapor state.

From these values that he can read

directly and with a few conversion factors from his memory, he can easily calculate such things as the amount of refrigerant that will have to be circulated to do the particular job on which he is working, how large the refrigerant lines and vessels must be, how big the compressor will have to be (its displacement), how big the motor must be (in horsepower), amount of current required to operate it, amount of condenser water used, etc.

ITS VALUE TO THE REFRIGERATION SERVICE ENGINEER

It is not often that the refrigeration service engineer needs to make calculations of this nature, but he should understand what the chart means and how it is used, for occasionally he can use it in determining the refrigerating capacity of a machine on which he has no data, what the temperatures and pressures should

be in certain parts of the system, the motor size and loading etc.

Moreover an understanding of this chart will lead to a better understanding of what is going on throughout the system and he can thus tell better when something is wrong and where and how to correct it.

HELPS DIAGNOSE THE TOUGH PROBLEMS

It won't help on how to fix a seal leak or realign pulleys or replace a noisy compressor, but it will help him on some of those tough jobs where he can find nothing mechanically wrong but where something is preventing the machine from keeping the refrigerator as cold as it is supposed to be or as the user wants it.

Those are the hard ones; the ones where nothing can be found wrong, but where the job isn't working right nevertheless. Those are the ones that the customer has had several men on, but they didn't find the trouble; the ones that make a fellow feel good when he fixes them and that build him up with the customer if he does.

Fig. 1 shows an example of a Mollier diagram for "Freon-12," of the type known as a "pressure-enthalpy" chart. The vertical scale on the left (known as the "ordinate") is graduated in pounds per square inch absolute. To convert this to gauge pressure, subtract 14.7, or what is sufficiently accurate for most purposes, 15.

The horizontal line at the bottom (known as the "abscissa") shows the amount of heat in the refrigerant (also called heat-content or enthalpy) in B.t.u. per pound of refrigerant circulated through the system.

On the left is a curved line labeled "Saturated Liquid" which is gradu-

Mollier Chart for Use with 'Freon-12'

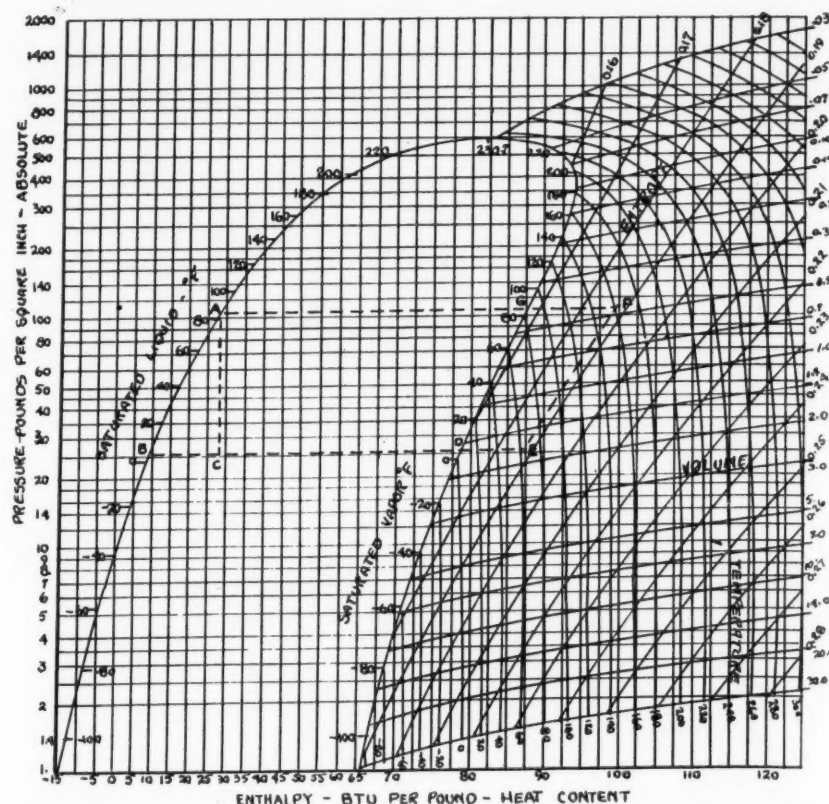


Fig. 1—By means of a Mollier chart, the refrigeration engineer or mechanic can often diagnose those difficult service problems where nothing seems to be wrong, but the system does not produce the refrigerating effect it should. This chart is of the "pressure-enthalpy" type for "Freon-12."

HOW TO FIND THE LATENT HEAT OF EVAPORIZATION

The only cooling the liquid can do is to remove the heat needed to make it boil—the latent heat of vaporization. When it first gets into the evaporator it starts to boil and vaporize and it continues to take on heat until it has all turned into a saturated vapor as indicated by point D when its heat content is just under 80 B.t.u. per pound (78.79 to be exact).

(To Be Continued)

ated in degrees F. This line shows the boiling and condensing temperatures corresponding to the pressures shown on the ordinate.

For example, a "saturated" or solid liquid, in the liquid line just before it enters the expansion valve, let us say at a temperature of 86°, would be at a pressure of just under 110 pounds per square inch, absolute, (PSIA). Actually, according to the tables, it would be 107.9 PSIA or 93.2 pounds per square inch gauge (PSI).

HOW TO FIND THE HEAT CONTENT OF THE LIQUID

From the 86° point which we have marked A, run a line down to the abscissa to find how much heat is in this 86° liquid at a pressure of 108 PSIA and we find that is about 28 B.t.u. per pound.

As this liquid goes through the expansion valve it drops to the pressure in the evaporator. Since the evaporator is at, let us say, 5° F. the pressure corresponding to 5° is about 27 PSIA. (The tables give it exactly as 26.51 PSIA or 11.81 PSI.)

In going through the expansion valve the pressure drops from 108 PSIA to 27 PSIA, corresponding to the evaporator temperature and this is indicated by point B on the Saturated Liquid curve. At this point the liquid has been cooled from 86° to 5° and in doing so has lost its heat content from point A of 27.72 B.t.u. per pound to point B 9.32 B.t.u. per pound or a loss of 18.4 B.t.u. per pound. That is, 18.4 B.t.u. had to be extracted to cool the pound of liquid from 86° down to 5°.

We Sell Thru—

Distributors of refrigeration and insulation. Get particulars on our NEW

Master Food Conservator

the Modern way to Conserve food

Master Manufacturing Corp.

121 Main St. Sioux City 4, Iowa

800,000 Master Food Conservators In Use

Pulleys, Flywheels—

V-Groove Pulleys, 1 and 2 grooves, from 2" to 7"

Flywheels up to 18", spoke and fan type

These pulleys made from best quality grey iron

Write for Quotations

PRESTON - SANFORD

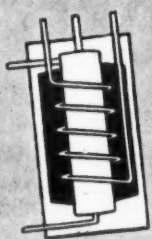
Incorporated

6630 East Canfield Ave.
Detroit 7, Michigan

save hours
of CALCULATIONS!

THERMOBANK

by KRAMER



* RAPID
SELECTION
TABLES
for LOW TEMPERATURE
APPLICATIONS

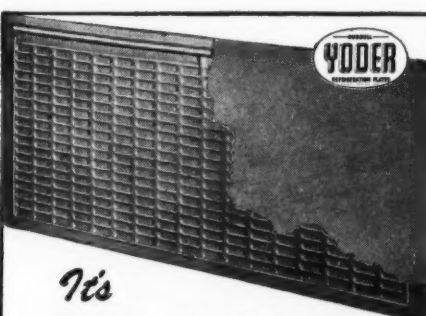
* published
for
the 1st time
IN THE INDUSTRY

With the Rapid Selection Tables in this new Kramer book you can ascertain the BTU Load and required evaporator size as easily as you can find a number in the phone book. These tables include 1440 individual calculations covering freezers from 5' x 4' to 25' x 25', over a temperature range of from +10°F to -20°F, under various loadings and applications.

The book also includes a complete explanation of the theory, operation and application of the THERMOBANK System, in addition to a wealth of other low temperature information and data useful to refrigeration engineers, servicemen and salesmen.

Send for Bulletin 16-N

HEAT
TRANSFER
EQUIPMENT KRAMER-TRENTON CO.
TRENTON 5 • NEW JERSEY



It's
FULL FLOODED
THE HUBBELL-YODER
REFRIGERATION PLATE

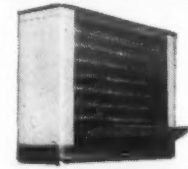
Every square inch of surface
is prime heat pickup

ENGINEERING SERVICE, INC.
1309 West 80th St., Cleveland, Ohio
Sole Agents

SPOTLIGHT!

AND THE 3 UNIT

UNITRON for Cooling



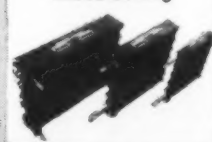
THERMOTRON for Control



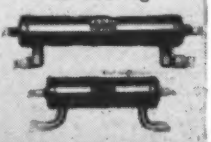
CONDENSOTRON for Power



EXOTRON for Condensing



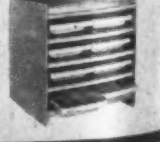
CAPACITRON for Boosting



THERMEK for Transfer



CUBE-O-TRON for Ice



on ELPECO
Engineering

COMMERCIAL LINE

The most important ingredient in any piece of Green Dragon equipment is unseen.

It is fine engineering, meticulously applied, and supported by years of exhaustive research.

Service engineers who buy it, and ELPECO Wholesalers who distribute it, are conscious of the care we exercise in the development of every major component or accessory.

In ELPECO's Modern laboratories, the search continues day and night for better ways to provide you with ever finer equipment.

The Green Dragon trade-mark is all you need look for when you want superlative commercial equipment. Look for it at your WHOLESALER'S, of course.

WRITE FOR
OUR POLICY BOOK
"YOU AND ELPECO"

ELECTRIC POWER EQUIP. CORP., PHILA. 48, PA.



New officers of the Illinois Refrigeration Service Engineers Society are (left to right) Robert Saunders, secretary; John Sackey, president; Wm. McCarley, second vice president; Ralph Porter, treasurer; and Floyd Lilly, first vice president. Leslie Sturch (not in the picture) is sergeant-at-arms.



Everybody enjoyed Herman Goldberg's bang-up party in Chicago recently. At the left he's welcoming the guests while Jimmie Costello, extraordinary master of ceremonies, stands by. Pictures were taken by Irving Alter.

Lambert Appointed York Consumer Sales Manager Redmond to Increase Small Motor Output

YORK, Pa.—Appointed manager of consumer sales for the York Corp., John M. Lambert will supervise all air conditioning and refrigeration sales made direct with users by the corporation's national district office organization, J. R. Hertzler, vice president and general sales manager, has announced.

He will be supported by Fred C. Wood, manager of air conditioning sales, and James Scott, manager of refrigeration sales, according to Mr. Hertzler.

In his 28 years with the York organization, Mr. Lambert has supervised dairy equipment sales, managed sales at the Baltimore office, and has also managed the corporation's national service office in Washington, D. C.

ITHACA, Mich. — Production of 1/4-hp. electric motors is expected to increase to 3,000 daily within a month at the local plant of the Redmond Co., Inc., Plant Superintendent John C. Fitzgerald has announced.

The plant, which now produces 2,200 motors daily, intends to boost its working force from 275 to 500 employees. Acquisition of an adjacent building will allow for the expansion.

Michigan RSES Meets Oct. 21

OWOSSO, Mich.—A meeting of the Michigan chapter of the Refrigeration Service Engineers Society will be held at the Owosso Hotel here at 2 p.m. Oct. 21, C. H. Earl, temporary secretary, has announced. Dinner will be served at 6 p.m.

Methods of Determining Ceilings on Rebuilt Electric Motors Outlined for Contractors

CLEVELAND—The OPA-approved method of determining ceiling prices on rebuilt electric motors carrying a one-year guarantee has been reviewed by the National Association of Refrigeration Contractors to assist contractors and service shops.

The maximum price for the sale and delivery of rebuilt (with one-year guarantee) motors of 1/4-hp. or less is 75% of the list price of the nearest equivalent new motor plus \$7 less an exchange allowance, if there is an exchange made, of \$1 for a 1/4 hp. or less motor, \$2 for an exchange motor over 1/4 hp. and including 1/2 hp., and \$3 for over 1/2 hp. and including 3/4 hp.

On sales from motor rebuilders to contractors and service shops the maximum price is 85% of the ceilings as determined above.

A manufacturer's list price on a new 1/4-hp. motor may be \$12.25. A refrigeration contractor can charge his customer \$16.19 for an equivalent rebuilt and one-year guaranteed motor (75% of \$12.25 plus \$7.) If an exchange deal, the allowance is \$1. For that same type of motor a

motor rebuilder may charge the contractor \$13.76 (85% of \$16.19).

Variations in manufacturers' list prices due to different scales of discounts are handled in this way, says N.A.R.C.: Manufacturer A's list price on a small motor is, say, \$20, with a discount of 15%. Manufacturer B's list price for the same type of motor is \$34 with a 50% discount (his entire line carries that discount). In both cases net price is \$17.

The retail OPA ceiling price of a rebuilt and guaranteed A type motor is \$22 (75% of \$20 plus \$7). Retail price of the type B motor is \$32.50 (75% of \$34 plus \$7).

Motor rebuilders may charge refrigeration contractors or service men 85% of \$22 for the type A motor and 85% of \$32.50 for the type B motor.

Maximum ceiling price for any sale and delivery of any second-hand motor of 1/4 hp. or less which is not rebuilt or guaranteed is 75% of the list price of the nearest equivalent new motor.

Motors of 2 hp. or more that have been rebuilt and carry a guarantee are to be sold at 85% of the "base

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Air Conditioning and Refrigeration News published weekly at Detroit, Michigan for October 1, 1946.

State of Michigan }
County of Wayne } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Edward L. Henderson, who, having been duly sworn according to law, deposes and says that he is the business manager of the Air Conditioning and Refrigeration News and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:
Publisher, George F. Taubeneck, Grosse Pointe, Mich.
Editor, George F. Taubeneck, Grosse Pointe, Mich.
Editorial Director, Phil B. Redeker, Detroit, Mich.
Business Manager, Edward L. Henderson, Detroit, Mich.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)
Business News Publishing Co., 450 W. Fort St., Detroit, Mich.

Margaret B. Cockrell, 18090 Wildemere, Detroit, Mich.

Helen C. Henderson, 17146 Parkside, Detroit, Mich.

George F. Taubeneck, 570 University Place, Grosse Pointe, Mich.

Phil B. Redeker, 112 W. Euclid Ave., Detroit, Mich.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

Fifty Two Twenty Nine Cass Avenue Co., Detroit, Mich.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is 13,078. (This information is required from daily; tri-weekly; semi-weekly; and weekly publications only.)

Edward L. Henderson
(Signature of business manager.)

Sworn to and subscribed before me this 27th day of September, 1946.

[SEAL] Helen C. Henderson
(My commission expires Dec. 26, 1947.)

Filterpure

for DOUGH RETARDERS

with
AIR PURIFICATION

Check These Features

- ★ Designed especially for Dough Retarders —For installation behind the Mullion
- ★ Coil and air circulation scientifically balanced to provide humidity in excess of 85% at 35° box temperature
- ★ Complete air purification
- ★ Centrifugal blower circulation
- ★ Vertical air discharge through concealed drip pan
- ★ Baked enamel finish . . . on rustproofed steel

— Sold By —
Leading Refrigeration Wholesalers

BETZ CORPORATION

HAMMOND, INDIANA

Check these advantages-

THE NEW BTC PRINCIPLE OF CROSS-FLOW FLOODING GIVES

- ✓ More Prime Surface Per Square Foot of Plate
- ✓ Fully Efficient Prime Surface
- ✓ Low Pressure Drop

The Cross-Flow system of the B.T.C. Evaporator Plate is designed to give you a maximum prime surface. The refrigerant is distributed equally and efficiently so that every square inch of prime surface is effective. And the Cross-Flow system in the B.T.C. Evaporator Plate assures you a low pressure drop, with the consequent low operating costs.

B.T.C. Evaporator Plates will do your refrigerating job with peak efficiency.

BTC
EVAPORATOR PLATES

THE BREWER-TITCHENER CORPORATION
CRANDALL-STONE DIVISION
BINGHAMTON, N. Y.

price." If sold as is, the ceiling is 55% of the "base price."

In most cases, says N.A.R.C., the "base price" will be the manufacturer's list price on Oct. 1, 1941, on the same type of new motor, less the smallest discount, if any, to users.

If for some reason the Oct. 1, 1941, price cannot be used as the "base price," then the new motor price effective at the time the second-hand motor is sold is employed, less the user discount.

AIR CONDITIONING

condensers and coolers **FAST**
designed and built

We design, build, retube or rebuild quickly any unit with tubes, standard or special, for Freon, ammonia, CO₂. Materials on hand for prompt delivery. Emergency maintenance work 24 hours a day, anywhere.

Condenser Service & Engineering Co., Inc.
88 River Street, Hoboken, N. J.
Phone HObooken 3-4425. After 6 P. M. or Sundays, HObooken 3-4428

A MASTERPIECE in Thirst-quenching Convenience

You're always Sure with an Oasis-built by Ecco, pioneers in the electric water cooler field.

The EBCO Mfg. Co.
401 W. Town St.
Columbus 16, Ohio

Estun

Refrigerants Have These ADVANTAGES

At No Extra Cost To You!

- ① Lowest moisture content.
- ② Individual cylinder tests and factory guarantees.
- ③ Banded cylinders for easy identification.

Blue band—**SULPHUR DIOXIDE**

Red band—**METHYL CHLORIDE**

Also—**METHYLENE CHLORIDE**
and **FREON 11-12-22-113**

Estun Refrigerants are sold exclusively through recognized jobbers and distributors.

Formerly
Pittsburg Chemical Co.

Estun

CHEMICALS, INC.

3100 E. 26TH ST., LOS ANGELES 23, CALIF.

WANTED-- Sales Engineer

ONE of Detroit's oldest and leading distributors of air conditioning and refrigeration equipment requires a Sales Engineer. Must be experienced in sales, sizing and making rough layouts. Excellent opportunity, substantial salary and commission. A Carrier Distributor.

Write

James and Roach
Incorporated

282 E. MILWAUKEE ST.
DETROIT 2, MICHIGAN

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS
CORPORATION

47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

WANTED: - - - Senior Refrigeration Engineer

This is an exceptional opportunity for a qualified Engineer with five to ten years experience in the design, development, testing, and manufacture of self-contained fractional horse-power units.

We manufacture commercial bottle coolers and frozen food cabinets on a line production basis. Our manufacturing plant is located at Muskegon, Michigan. Our distribution is international.

The individual we are seeking is a man between 30 and 45 years of age and is capable of handling a bigger job than the one he now has. He will be expected to assist the Chief Refrigeration Engineer with design, development, and manufacturing problems. A college degree is important but equivalent experience may be acceptable. He and his job will grow together, and his future will be limited only by his ability and industry. The starting salary will be substantial.

You may apply in full confidence to P. W. Schulze,
The Brunswick-Balke-Collender Company,
Muskegon, Michigan.

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$4 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Mich.

Gentlemen: Send the NEWS for one year.
☐ \$4 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

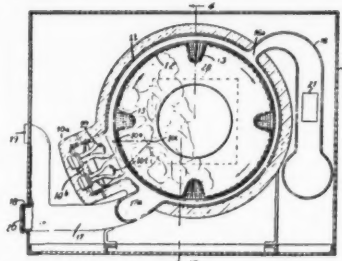
City.....Zone.....State.....

10/14/46

PATENTS

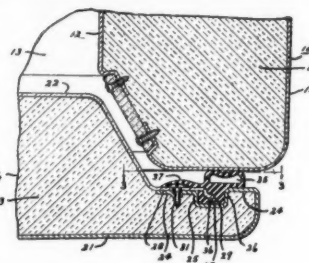
Week of Aug. 27

2,406,494. **DOMESTIC APPLIANCE.** Donald K. Ferris, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application May 14, 1943, Serial No. 486,932. 4 Claims. (Cl. 34-82.)



1. A clothes drier comprising a stationary casing, a perforated, cylindrical drum in said casing rotatable about a horizontal axis, means for rotating said drum about said axis, an infra-red lamp comprising an infra-red electric heater encased in glass supported in said casing adjacent the lower upwardly rising portion of said drum, and means to circulate air through said casing and drum.

2,406,629. **REFRIGERATING APPARATUS.** Carl F. Petkowitz, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Oct. 7, 1944, Serial No. 557,567. 2 Claims. (Cl. 20-35.)

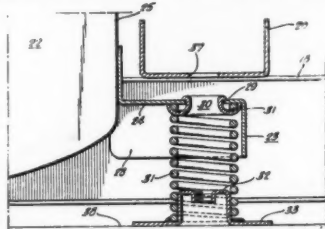


1. A door for a refrigerator cabinet comprising, an inner wall forming member and an outer wall forming member providing a chamber therebetween, insulating material within said chamber, said outer member having a flange portion thereon extending inwardly from sides of the door

in spaced relation to the front thereof, said inner member having a flange portion thereon overlapping and abutting the flange portion on said outer member, means for securing the overlapping and abutting flange portions in direct contact with one another, a seal element for said door including a resilient sealing portion adapted to engage the cabinet and an integral mounting portion abutting said flange portion on said outer member, said seal element having a hook-like part formed in the mounting portion thereof, said flange portion on said inner wall forming member having an offset peripheral part substantially conforming to and fitting over said hook-like part of said seal element, and said securing means engaging said members to clamp said seal element mounting portion therebetween whereby said seal element is locked to the door.

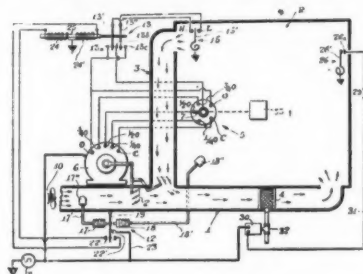
Week of Sept. 3

2,407,014. **REFRIGERATOR MOTOR-COMPRESSOR MOUNTING.** Welton Paul Jones, Rydal, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Nov. 6, 1943, Serial No. 509,283. 10 Claims. (Cl. 284-21.)



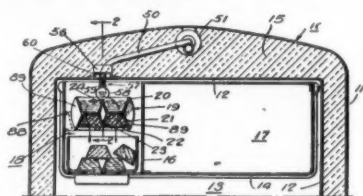
1. In a refrigerator, a frame structure, a motor-compressor unit adjacent said frame structure, and means interconnecting said frame structure and unit to secure the latter to said frame structure, said means being operative when released to disconnect and vibrationally isolate the unit from said frame structure.

2,407,036. **AIR-CONDITIONING CONTROL.** Earl R. Snively, Roselle, N. J., assignor to Thomas A. Edison, Inc., West Orange, N. J., a corporation of New Jersey. Application Aug. 21, 1942, Serial No. 455,564. 22 Claims. (Cl. 257-3.)



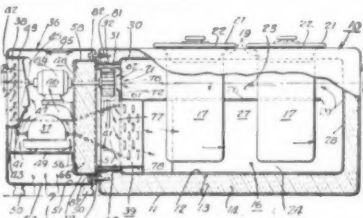
22. The method of conditioning the air within an enclosed space which comprises adjustably admitting outside air at predetermined minimum rates dependent upon the relative occupancy of the space, and controlling the admission of further outside air at varying rates depending on the inside temperature and on whether the outside temperature is above or below the inside temperature.

2,407,058. **FREEZING APPARATUS.** Henry Walter Clum, Upper Darby, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Sept. 30, 1944, Serial No. 556,594. 16 Claims. (Cl. 62-2.)



1. In a device of the character described, a mold having oppositely facing receptacles in thermal transfer relation with each other, associated temperature reducing means, liquid supply means, means for rotating the mold to bring said receptacles successively into position to receive liquid from said supply means, and means responsive to the rotation of the mold for actuating the supply means to deliver liquid to the receptacles.

2,407,159. **REFRIGERATION APPARATUS.** Welton Paul Jones, Rydal, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Jan. 30, 1945, Serial No. 575,204. 2 Claims. (Cl. 62-102.)



1. In refrigeration apparatus, a heat-insulated cabinet having an apertured wall, a food container within and in spaced relation with the walls of said cabinet, a partition in the cabinet forming adjoining communicating passages each embracing a portion of said container, portable cooling means detachably connected to said cabinet and having an insulated wall adapted to close said aperture, said portable means further comprising compressor, condenser, and motor elements mounted at the outer side of said wall and an evaporator and an impeller mounted at the inner side of said wall, said impeller being operatively connected with the said motor, and said evaporator and impeller being arranged with respect to said partition so that operation of the impeller is effective to set up a circulation of air through the passages and over the surfaces of the evaporator.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion. Limit 50 words.

RATES for all other classifications \$5.00 per insertion. Limit 50 words.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS AVAILABLE

WANTED PRODUCTION engineer superintendent for producing coolers and cases, must understand wood and metal construction, make drawings, train men, be experienced in all plant operations, have successful record, old firm centrally located. Give qualifications, etc. BOX 2086, Air Conditioning & Refrigeration News.

REFRIGERATION AND air conditioning sales engineer, experienced, by large midwest wholesaler, salary open. Write BOX 2090, Air Conditioning & Refrigeration News.

WANTED EXPERIENCED air conditioning and refrigeration engineer for assembling and compiling information for large manufacturer's price and data book. Applicant must have thorough knowledge of air conditioning and refrigeration applications. Advise background and also salary expected. BOX 2092, Air Conditioning & Refrigeration News.

APPLIANCE SERVICE MEN—Ohio manufacturer with national merchandise distribution has opportunity for experienced appliance service men to set up repair shops in key cities and trading centers. Requires nearly full time traveling. Need men who can supervise groups of service men. Send full information about yourself to BOX 2093, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE—Leading manufacturer refrigeration and vaporizing oil burning controls offers excellent opportunity for experienced representative in New York territory. Must know trade and have some knowledge of application of this equipment. Territory established with our products in leading position. Merits consideration of high caliber man. BOX 2094, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

NEW OR USED 4 x 4 2-cylinder ammonia water cooled condensing unit preferably with 7½-hp. motor for 220-3-60. If used, must be in good condition. Will consider 5 x 5 machine if smaller unit not available. CONDITIONED AIR, INC., P. O. Box 834, Macon, Ga.

EQUIPMENT FOR SALE

IMMEDIATE DELIVERY 6 hole ice cream freezers, streamlined cabinet—stainless steel top. Sealed Hull \$175. Stainless steel dairy case, 7, 8, 10 feet. ACCURATE METAL WORKS, 837 Tilden St., New York, N. Y., OL 5-6905.

SECTIONAL WOOD walk-in storage boxes, 4" fiber glass insulation, exterior, spruce interior, automatic locks, steel saddle step. Built to specified size. Seven day delivery, \$1.27 per square foot F.O.B. New York. All styles freezer cabinets, immediate delivery. LEONARD BERGMAN, 150-19 Liberty Ave., Jamaica, N. Y. Jamaica 6-1733.

FOR IMMEDIATE DELIVERY double duty stainless steel butcher, delicatessen and dairy display cases, 6'-8'-10' and 12' lengths complete with coils. Also 5 and 10 gallon electric water coolers. For information apply: COMMERCIAL REFRIGERATION SERVICE CO., 651 Atlantic Ave., Brooklyn, N. Y.

IMMEDIATE DELIVERY—new air conditioning equipment. Weathermakers complete with motor, "Freon" coil, expansion valve, drives, filters, etc. 2 ton up to 25 ton (1,000 to 12,000 CFM Capacity); centrifugal blowers, SWST and DWST and twin mounted, propeller fans, heating and cooling coils, evaporative condensers. CONTROLTEMP EQUIPMENT SALES CO., 236 Butler St., Brooklyn 17, N. Y.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units ¼ up to 2 hp. Write for particulars. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

IMMEDIATE DELIVERY 20 cu. ft. all-steel glass top Freezers: upright glass top or open, with superstructure; Ice Cream, Frozen Food open and closed cabinets; Reach-ins, Wood and Metal Storage Boxes; all glass Sliding Door Dairy Refrigerators; Beverage Coolers; Air Conditioning Units; Motors 5-20 hp., etc. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, N. Y. Main 2-9093.

NATIONALLY KNOWN ice cream cabinets for immediate delivery—with or without machines. 4, 6 or 8 holes. Inquire FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, N. Y.

ELECTRIC BAKE OVEN (used)—Steel construction with elements and thermostat; 220V, 3' high, 6' wide, 3' deep. Useful for drying out evaporators, compressors, condensing units, etc. Will sacrifice. Write, stating price, to KRICH-RADISCO, INC., 422 Elizabeth Ave., Newark 8, N. J.

CONDENSING UNITS complete with motors now available with the Magic-Temp dry beverage coolers. Immediate delivery. Your territory may be open. Write now. MAGIC-TEMP COOLER CO., 311 John St., Utica 2, N. Y.

COOLING COILS new, all copper direct expansion type. Suitable for low, medium, and high temperature refrigeration and air conditioning. Size 32" by 25", 7 rows deep, 3 fins per inch. Immediate Delivery. Price, lots 10 or more \$90 each, F.O.B. Indianapolis, Ind. PALLER ENGINEERING CO., 5610 Carrollton Ave.; Indianapolis, Ind.

COMPRESSOR AND PARTS rebuilding—Compressor, float valves, water valves, low pressure controls, evaporators, water cooled condensers, condensing units and many other items replaced from our large stocks, or repaired upon receipt of your defective material. Send for our catalogues listed. REFRIGERATION MAINTENANCE CORP., 321 E. Grand Ave., Chicago, Ill.

SEALED CROSLLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Croslley "F-12" units. Set of three \$6.75 (Part No. 1020). Installation tool \$1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals. (Part No. 1060.) Set of three \$2.85. WESTINGHOUSE TERMINALS. Installed from the inside. (Part No. 1030.) Set of three \$2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040.) \$2.55 each. SEALED NORGE terminal, packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050.) Three sets (9 washers) \$1.00. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FOOD-BEVERAGE COOLERS—Combination 6½ cu. ft. wet or dry bottle storage with additional 7 cu. ft. food or bottle storage. Have ¼ horsepower twin cylinder units. Stainless steel sliding top-refrigerator door for food compartment. Very low price. Immediate shipment. TALBERT-THOMAS COMPANY, 2457 South Michigan Avenue, Chicago, Ill.

FRANCHISES WANTED

LARGEST ESTABLISHED concern on Long Island selling and installing heating and air conditioning interested in securing additional lines of commercial and industrial refrigeration and air conditioning equipment for our well trained sales force. Dealer-distributor basis. ALLBOROS UTILITIES CO., 125-01 Queens Blvd., Kew Gardens, N. Y. VI-7185.

WOULD LIKE to secure an agency-headquarters in New Orleans, La., handling refrigeration equipment—prefer commercial refrigeration equipment. Write THOMPSON'S REFRIGERATION SERVICE, 2627 St. Philip St., New Orleans, La., giving details.

NEVADA WHOLESALER with a large number of accounts, desires added lines of representation in Refrigeration parts, units and supplies. Interested in both Ammonia and Low-Pressure valves, controls, fittings, etc. Write BOX 2068, Air Conditioning & Refrigeration News.

ATTENTION REFRIGERATION DEALERS IMMEDIATE DELIVERY

New ½ hp. and 1 ½ hp. condensing units air-cooled for package and remote installations. Inquiries invited.

Box 2081, Air Conditioning & Refrigeration News

ATTENTION MANUFACTURERS!

We specialize as sole distributors in freezers and refrigeration. Wonderful coverage in the Eastern Seaboard States from Maine to Florida. Our dealers are well established, our lines are complete. We deliver by trailer, no sales help needed. Field representation and service guaranteed on your products. Inquire about our export department. We have branches in Greenwich, Connecticut; Poughkeepsie, New York; Mt. Vernon, New York; Philadelphia, Pennsylvania; Miami, Florida and New York City. If you are looking for real representation in this area, write to

Complete Refrigerator Supply
[William J. Penachio]
92 Seventh Ave., New York 11, N. Y.

REFRIGERATION UNITS

Equipped with Continental Gasoline Engine—4 cylinder—self-starting. Available with 3 H.P. Electric Motor. 1800 cu. ft. Refrigerated Walk-in warehouses, prefabricated. Immediate Delivery, crated for export. Send for full details.

General Refrigerators Corp.
678 Bway, New York 12, N. Y.
ST. 9-1222

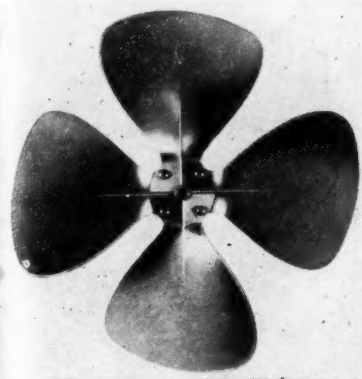
Canadian
**Refrigeration
Journal**

The only publication servicing
the industry in Canada

National Business Publications
Limited
Gardenvale, Que. - Canada

What's New

'Inherent Balance' Claimed for New Fan



Motionair Fan Assembly

BEVERLY HILLS, Calif.—Because all blades of the Motionair fan are made from the same die, the fan has inherent balance, claims the Motionair Co. here, manufacturer.

Conforming to the aero-dynamic principle of single curvatures for air-flow, the blades are precision spaced, permitting unusually quiet operation, the company says.

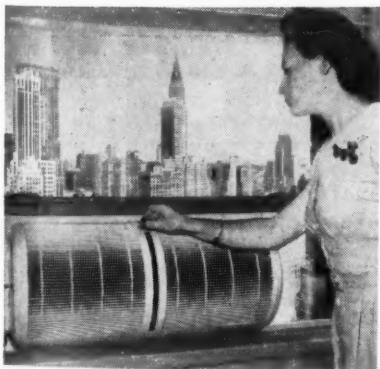
In addition to the balance acquired, the use of a single die permits low cost production and shipment of the fan in knocked down condition, thus saving 90% of the shipping and storage space, the manufacturer declares.

Should one or more of the fan blades become damaged, he points out, replacement of an individual blade returns the fan to perfect balance.

To adapt the fan hub to various shaft diameters of motors, the disassembled hubs can be easily rebored on any small lathe, according to the manufacturer.

Because Motionair blades are identical in shape and pitch, the company claims, the blades will not exert unequal centrifugal forces or unequal air deflections.

Single Knob Controls U.S. Window Ventilator



U.S. Airco Ventilator

NEW YORK CITY—A new window power ventilator, operated entirely by a single control knob, is now being manufactured by the U. S. Air Conditioning Corp. here.

By moving the knob from the bot-

tom to the top of the convex grille, the ventilator in turn brings fresh air into the room, circulates both fresh and room air, recirculates room air only, and acts as an exhaust fan drawing air out of the room, the company said.

Industrial Designer Charles Davies, who developed the ventilator, points out that the curved shape of the grille automatically controls the direction of the air flow. When fresh air is drawn in, the air is blown down towards the floor as well as straight across the room. When the room air is recirculated, it is directed towards the ceiling so as not to cause draughts.

Air volume is controlled by a rheostat that is part of the control knob, according to Mr. Davies.

Two filters are used in the ventilator, one for fresh air and the other for the recirculated air.

In this design, the whole cylinder revolves when the control knob is moved. The cylinder is so constructed that when the knob is at the bottom of the grille, fresh air enters the ventilator through an open louver, passes through the blower and into the room. When the knob is moved to the first notch, the cylinder revolves so that both room air and fresh air can pass through the blower and into the room.

At the second notch, the fresh air louver is closed and the room air louver is opened completely. At top position, the outlet from the blower to the room is closed off and an outlet to the outside is opened. Thus room air passes through its louver, into the blower, and then outside.

A small motor, of undisclosed size, powers the blower. The switch is in the control knob.

High Strength Alloy For Welding Announced

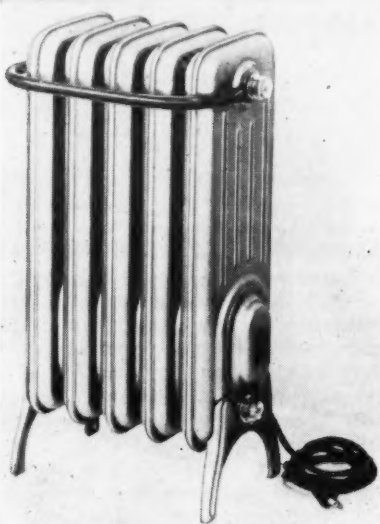
NEW YORK CITY—With the stabilization of the industrial silver market, the Eutectic Welding Alloys Corp. has been able to develop a welding alloy that will provide high strength welds on ferrous and non-ferrous metals at an exceedingly low melting point, the company has announced.

The new alloy, known as EutecRod 1801, can be applied by the oxyacetylene torch, furnace, or high frequency induction heating equipment, according to the company.

It bonds at base metal temperatures of 940° to 1120° F., and melts at 1143° F., Eutectic said. The company claims that this low melting temperature makes it possible to produce superior welded joints at new low costs.

At this temperature, the company declares, the new rod flows freely into close-fitting joints due to its extremely high capillary action. In addition, weld deposits will have a sheer strength of 120,000 lbs. per sq. in., good corrosion resistance, and good electrical conductivity.

EutecRod 1801, available in rod, wire, strip, and powder form, is used with a special flux, Eutector flux 1801, the company said.



Co-Z-Air Electric Radiator

Morton Produces 8 Models Of Co-Z-Air Radiators

DETROIT—Eight standard models of Co-Z-Air electric radiators are now being manufactured by Henry J. Morton Associates here, Henry J. Morton, president, has announced.

The models include two wattage ranges—800 and 1,320 watts—in both five and eight section types. They may be plugged into any 110 to 120 volt AC or DC outlet. They deliver 2,600 and 4,300 B.t.u. respectively, according to Mr. Morton.

All models are equipped with a carrying handle which can also serve as a drying rack, Mr. Morton said.

Elements in the radiator are completely enclosed. No water or steam is used. Cold air is drawn off the

floor, passed through the radiator and circulated into the room through concealed vents in each section of the radiator, according to Mr. Morton.

Co-Z-Air heats rapidly, but never reaches a temperature that would cause burning if accidentally touched.

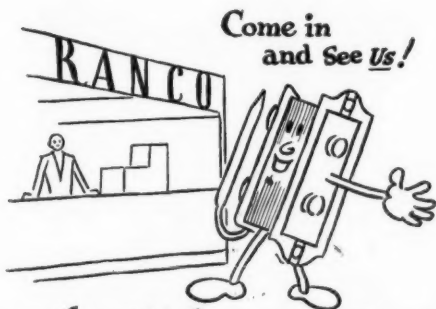
BEVERAGE COOLERS

large coil surface, blower fan, baked finish, stainless steel doors. BEVERAGE COOLERS also available stainless steel throughout. REACH-IN REFRIGERATORS—20, 30, 42 cu. ft. sizes, stainless steel inside and out. ICE CREAM CABINETS—6 hole, hard rubber flip-top doors, stainless steel tops. FREEZERS—8, 12, 20, and 25 cu. ft. with plate coils. OPEN TYPE FROSTED FOOD CASES—20, 28, 31 cu. ft. with plates.

IMMEDIATE DELIVERY ON ALL ITEMS

GENERAL REFRIGERATORS CORP.

678 Broadway, N. Y., 12, N. Y., ST 9-1222



at the All-Industry Exposition
in Cleveland

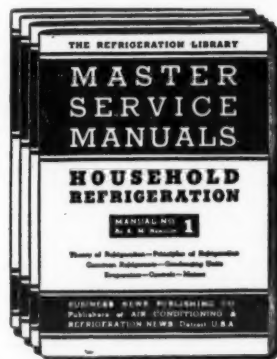
Have fun, friends -- we intend to -- but stop in and see us in between times.

We will be in booths 324 - 326 during the three-day show in Cleveland Public Auditorium.

Ranco Inc. COLUMBUS 1, OHIO

MASTER SERVICE MANUALS

- Sold by leading refrigeration parts wholesalers everywhere.
- Used by thousands of refrigeration service men throughout the world.
- Depended upon as textbooks in trade schools from coast to coast.
- Authentic and easy to understand.



By K. M. Newcum

SERVICE INFORMATION

MANUAL NO. 4—Service information on 12 makes of household electric refrigerators including Absopure, Apex, Atwater Kent, Coldspot (Sunbeam and Sears), Copeland, Dayton (Niagara), Fairbanks-Morse, Graybar Ilg-Kold, Iceberg, Liberty, Rice, and Servel. 129 illustrations. 128 pages. Price \$1.00.

Commercial Refrigeration

MANUAL NO. C-1—The theory and principles of refrigeration presented in a more complete manner than in household manuals. Properties of refrigerants, including effect on lubricating oils. Types of refrigerant cylinders, valves, and safety devices. Methods of drying and transferring refrigerants. 96 pages. 59 illustrations. 10 tables. Price \$1.00.

MANUAL NO. C-2—Installation and service methods. Detailed information on commercial condensing units and their component parts. Water regulating valves, both electric and pressure-actuated types. Flooded evaporators and low side float valves. Two-temperature flooded systems. 112 pages. 108 illustrations. Price \$1.00.

MANUAL NO. C-3—Installation and service methods continued. Chapters on expansion evaporators, including blower units and all modern types. Thermostatic and temperature controls. Refrigerant control valves. Electric motors, starters, overload relays. 144 pages. 116 illustrations. 7 tables. Price \$1.00.

THEORY

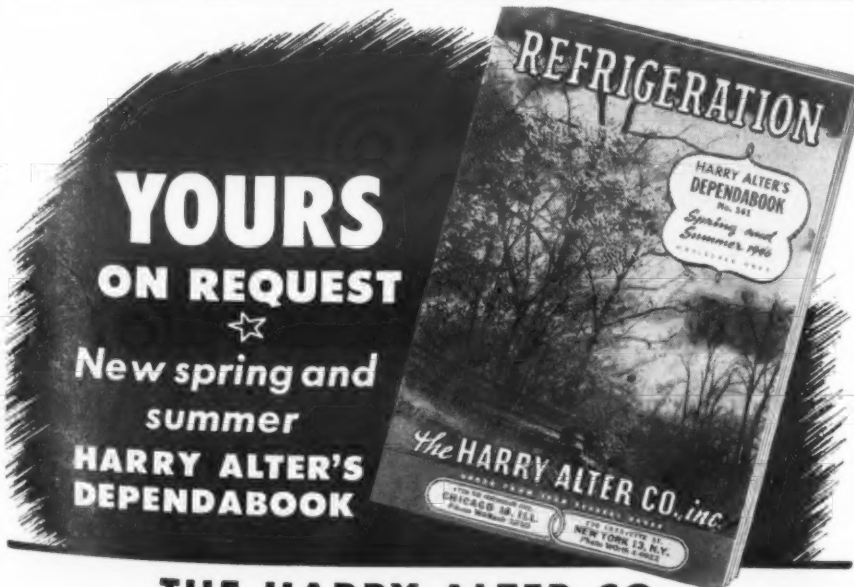
MANUAL NO. 1—The theory and principles of refrigeration explained in simple terms. Characteristics of common refrigerants. Construction and operation of the major component parts of a household refrigerator. 144 pages. 114 illustrations. 6 tables and charts. Price \$1.00.

DIAGRAMS

MANUAL NO. 2—Diagrams show how to distinguish the difference between the fundamental types of systems. Detailed instructions regarding the proper methods of installing and servicing each type. A comprehensive guide for all the popular makes. 128 pages. 179 illustrations. Price \$1.00.

DETAILED DATA

MANUAL NO. 3—Detailed data on methods of servicing several special refrigerators including Allison, ElectrICE, Holmes, U. S. Hermetic, Majestic Conventional, Majestic Hermetic, Socold, Iroquois, and Welshbach. 144 pages. 59 illustrations. Price \$1.00.



YOURS
ON REQUEST

New spring and
summer

HARRY ALTER'S
DEPENDABOOK

THE HARRY ALTER CO.

1728 SO. MICHIGAN AVE.
CHICAGO 16, ILL.

Two Big Warehouses
To Serve You

134 LAFAYETTE ST.
NEW YORK 13, N.Y.

Write for it on your letterhead

Business News Publishing Co., 450 W. Fort St., Detroit 26, Mich.
Publishers of AIR CONDITIONING & REFRIGERATION NEWS

Freezer Market - -

(Concluded from Page 1, Column 2)

media, and the performance of the new G-E unit under adverse climatic conditions—Mr. Young pointed out that the findings will prove helpful, not only to General Electric, but to all dealers who expect to sell home freezers.

The locality selected for the test is in Florida, where temperature and humidity average high and where there is less than normal national demand for freezers. The town has a population of about 22,000 persons, and a trading area of 55,000 persons. The nearest city is about 60 miles away. There are about 6,300 residential electric meters in the area. Effective buying income is slightly over \$30,000,000 and per capita income around \$1,400.

The test showed that the upper income group will buy home freezers now, but it will be some time before low income groups can be reached. Sales to age groups in the trial period were well diversified. In practically every instance the husband was included when the buying decision was made.

In addition to newspaper and radio advertisements, telephone solicitation proved to be a highly effective selling method. Twenty-one sales resulted from 79 telephone conversations.

Newspaper advertisements were also very effective: sales reached their greatest volume on the second day, before other media had been utilized. Window signs were another strong drawing-card. Mr. Young noted that "time and again cars would pull out of the line of traffic on seeing the sign."

Although one four-minute radio advertisement and two one-minute plugs were used on three successive days, only two prospects could be directly traced to them. Both of these people wanted to know whether the freezer could be used as a refrigerator. The same general question was raised by many other people in the area, which led Mr. Young to comment that "the dividing line between refrigerators and freezers is not yet distinct in the public's mind."

A well-stocked display sample in the store was found essential to sell-

ing and an empty one helpful for giving the detailed product story. The test indicated that packaging materials are a very helpful accessory in the sale of home freezers: A kit containing a variety of materials was used with the suggestion that the consumer experiment to find which kinds are most satisfactory. Enlisting the cooperation of the local utility company and frozen food distributor proved invaluable. Speaking of the former, Mr. Young observed that "this type of assistance should not be overlooked by any dealer or distributor."

There was widespread satisfaction with General Electric's 4-cu. ft. chest-type freezer, all but three people saying the size was just right. However, people from rural areas indicated a need for as much as 12 to 20 cu. ft.

'Shoppers' Will Test Salesmen - -

(Concluded from Page 1, Column 3)

business by thoughtless and discourteous treatment of present-day buyers and prospects.

Pointing out that when business is good, "to hell with good manners" is the attitude, the Institute explains that such tactics mean fewer sales, and subsequent business failures.

What the Institute hopes to insure with this particular program is that when customers visit electrical stores they will be:

1. Greeted in a friendly manner;
2. Treated courteously throughout the interview;
3. Given complete and detailed answers to their questions;
4. Understood sympathetically regarding their problems;

garding their problems;

5. Not given the "brushoff" but having even those appliances not readily available explained and described to them;

6. Invited to return when the store can supply the need.

Good salesmen will be recommended for an award. A cash prize of \$2 with a letter of praise will be sent to the salesmen by way of his boss.

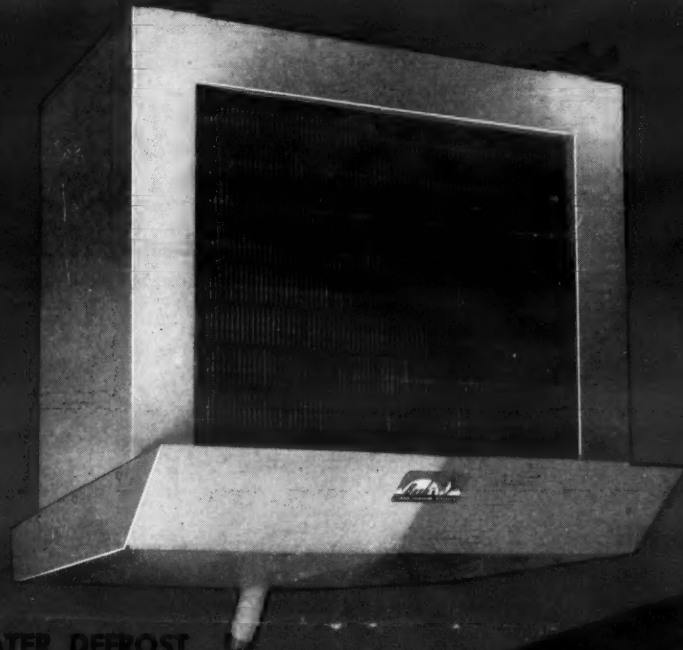
The "Goodwill Shoppers" will visit each store at least three times. In addition to reporting on the attitude of salesmen, the shopper will also comment on the general appearance of the store, the floor, and the window displays.

Deepfreeze To Launch New Promotion Plans

NORTH CHICAGO, Ill. — New Deepfreeze merchandising and sales promotion plans will be presented to Deepfreeze distributors at the company's national sales convention to be held Nov. 14 and 15 at the Drake hotel in Chicago. F. F. Duggan, general sales manager has announced.

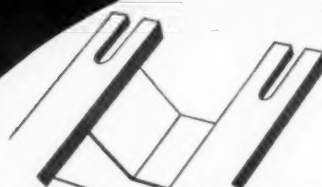
Participating in the convention will be G. H. "Rock" Smith, vice president and general manager; E. V. Newbell, advertising manager; S. J. Seibert, manager of the product service department; H. W. Whitmore, chief engineer; J. Baker, factory manager; and Mr. Duggan.

BUSH UNITS, ON PERFORMANCE RECORDS

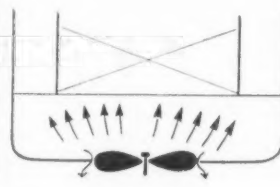


WATER DEFROST UNIT COOLER

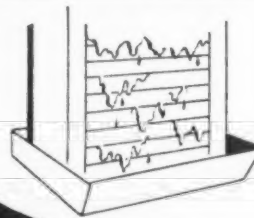
ARE THE MOST ECONOMICAL



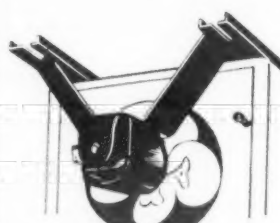
SLOTTED HANGERS
Permit greater ease of installation. Slip under lag bolts while other end is fastened.



DEEP PLENUM CHAMBER
Designed to give maximum distribution of moving air through core.



DEFROSTS WITH TAP WATER.
Less than five minutes needed for complete defrosting.



MOTOR SUPPORT
Light — yet strong and vibration proof. Assures smooth, quiet operation.

BUSH Units, on their performance record, are the most economical . . . dollar for dollar . . . that can be specified. These units are constructed sturdily with materials of highest quality to stand hard usage beyond the exacting demands of any refrigeration system. BUSH Units stand the test of time with an enviable record of dependable and trouble-free performance.

Address BUSH MANUFACTURING COMPANY, Hartford, Conn.
415 Lexington Avenue, New York, N. Y. • 549 W. Washington Boulevard, Chicago, Illinois. • Export Address: 13 East 40th Street, New York, N. Y. • Cable "ARLAB"

BUSH

HEAT TRANSFER PRODUCTS



Standard Unit Cooler



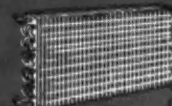
Water Defrost Unit Cooler



Ceiling Mounted Unit Cooler



Wall Mounted Unit Cooler



Condenser



Frost-Free Unit

SEE OUR DISPLAY AT BOOTH 610 AT THE CLEVELAND SHOW

It's a
REVELATION
—that's all!



- ★ Exclusive Dealer Franchise
- ★ Now in quantity production
- ★ All sizes: Industrial and Commercial
- ★ The last word in . . .

**ELECTRIC
WATER
COOLERS**

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California